

FINAL



Programmatic Environmental Assessment

Wing Infrastructure Development Outlook

July 2005



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Prepared for:
7 CES/CEV
Dyess AFB, Texas

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List of Acronyms

317 AG	317 th Airlift Group
7 BW	7 th Bomb Wing
7 MDG	7 th Medical Group
ACC	Air Combat Command
ACM	Asbestos Containing Material
AF	Air Force
AFB	Air Force Base
AFI	Air Force Instructions
AICUZ	Air Installation Compatible Use Zone
AMC	Air Mobility Command
ASTM	American Society for Testing and Materials
BEE	Bioenvironmental Engineering
BMP	Best Management Practice
CATEX	Categorical Exclusion
CEQ	Council on Environmental Quality
CERR	Real Property
CES	Civil Engineering Squadron
CEV	Environmental Flight
CFR	Code of Federal Regulations
CMP	Corrugated Metal Pipe
CONUS	Continental United States
dB	decibel
DoD	Department of Defense
EA	Environmental Assessment
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EO	Executive Order
EOD	Explosive Ordnance Disposal
EPA	Environmental Protection Agency
ERP	Environmental Restoration Program
FEMA	Federal Emergency Management Agency
FONPA	Finding of No Practicable Alternative
FONSI	Finding of No Significant Impact
FY04	Fiscal Year 2004
IAP	Initial Accumulation Point
IAQP	Integrated Air Quality Plan
ICRMP	Integrated Cultural Resources Management Plan
IMMP	Integrated Material Management Plan

List of Acronyms

INRMP	Integrated Natural Resources Management Plan
IWMP	Integrated Waste Management Plan
LBP	Lead-Based Paint
MAC	Military Airlift Command
MFH	Military Family Housing
msl	mean sea level
MWR	Morale, Welfare, Recreation
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NFIP	National Flood Insurance Program
NHPA	National Historic Preservation Act of 1966
NOAA	National Oceanic and Atmospheric Administration
NRHP	National Register of Historic Places
PA	Preliminary Assessment
PEA	Programmatic Environmental Assessment
RCP	Reinforced Concrete Pipe
RCRA	Resource Conservation and Recovery Act
RI	Remedial Investigation
ROW	Right-of-Way
SAC	Strategic Air Command
SCS	Soil Conservation Service
SEA	Supplemental Environmental Assessment
SWMU	Solid Waste Management Unit
SWPPP	Storm Water Pollution Prevention Plan
T&E	Threatened and Endangered
TCEQ	Texas Commission on Environmental Quality
TPDES	Texas Pollutant Discharge Elimination System
TPWD	Texas Parks and Wildlife Department
U.S.C.	United States Administrative Code
URS	URS Corporation
USACE	U.S. Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
UST	Underground Storage Tank
UXO	Unexploded Ordnance
VOC	Volatile Organic Compound
WINDO	Wing Infrastructure Development Outlook

1.1 INSTALLATION DESCRIPTION AND MISSION

1.1.1 Dyess Air Force Base History

Dyess Air Force Base's (AFB) (Figure 1) current prosperity evolved from open Texas rangeland largely through the efforts of the local citizens. Prior to the mid 1800's, the area abounded in buffalo herds and Indian scouting parties. Driving cattle to market ended with the establishment of the railroad in 1881 (Texas and Pacific); the area was then farmed and ranched. The construction of defensive forts began in 1849. This first line of forts ran between Fort Worth and Eagle Pass. However, these proved inadequate so a second line of forts was begun farther west. These were constructed between 1850 and 1867. Of particular note is Fort Phantom, which was built in 1851 about 14 miles north of present-day Abilene. In part, these forts also protected the Butterfield Stage Line that operated between September 1858 and February 1861 and ran to San Francisco. In 1942, pilot-training operations began during World War II at the Tye Army Airfield. The airfield was operated as an extension of the mission of Camp Barkeley, which was located several miles to the south of Abilene, and was home to over 60,000 military personnel. The airfield was closed in 1946. Fifteen hundred acres of the former airfield were used from 1947 to 1952 by the Texas State National Guard as a training facility, before being sold to the City of Abilene. Following the outbreak of the Korean conflict, the citizens of Abilene raised over three quarters of a million dollars to purchase 3,500 acres. In 1952, the City offered the land, along with the original 1,500 acres, to the Department of Defense (DoD) as a home for a new military base. Construction of Dyess AFB began the following year and the first unit was activated in 1955. This unique level of civilian dedication to military support continues to grow each year.

The first Strategic Air Command (SAC) aircraft to arrive at Dyess AFB were B-47 bombers and KC-97 tankers in 1956. Subsequently, B-52s were added, and then were phased out at Dyess AFB in 1984 to 1985. The B-1 began arriving at the base in July 1985. Other large, multi-engine aircraft currently assigned to Dyess AFB include C-130 troop/cargo carriers.

From 1961 to the present, troop carrier activities have taken place at Dyess AFB, first under Tactical Air Command, then Military Airlift Command (MAC), and then under Air Mobility Command (AMC). Maintenance facilities for numerous launch silos for Atlas F missiles were located on the installation from 1961 to 1965.

Following reorganization of Tactical Air Command and SAC, Dyess AFB became an Air Combat Command (ACC) facility.

1.1.2 Mission and Population

The 7th Bomb Wing (7 BW) mission statement is: "Proud People Working Together, Training and Exercising to Provide the Best Quality Professionals, Delivering Global Power and Airlift Forces to the Theater Commander." The 7 BW mission is to provide accurate, timely, and proactive command and control integration in direct support of B-1 and C-130 Continental United States (CONUS) training, CONUS operations, and deployed combat operations. Major units within Bomb Wing include Wing Plans and Treaties, Inspector General, Protocol, Safety,

Public Affairs, Comptroller, Staff Judge Advocate, and related personnel functions. The Operations Group includes all operational and training flying squadrons. The Maintenance Group includes maintenance of aircraft, components, and equipment, as well as general operations and munitions. The Mission Support Group includes civil engineering (design and construction, environmental, fire, housing, operations, and explosive ordnance), communications, supply, transportation, security forces, and services. The Medical Group is comprised of administrative, hospital, dental, and bio-environmental squadrons.

Dyess AFB has a working population of over 5,453 people; approximately 5,125 active military and family members on the base, and approximately 328 civilians. Tenants include the 317th Airlift Group (317 AG)/AMC, Defense Investigation Service, Federal Aviation Administration, Defense Reutilization, Army/Air Force Exchange Service, Defense Contract Management, Texas Air National Guard, Defense Commissary Agency, Air Force Audit Agency, U.S. Marine Detachment, Weapons School, and Dyess AFB Riding Club.

1.2 PROGRAM OBJECTIVES

The Dyess AFB vision is implemented through the Air Force's comprehensive planning process, which seeks to rationalize the process by which decisions concerning land use, infrastructure development, and project sitings are made. The following goals reflect the comprehensive planning process:

- Direct and guide the long-range development of the base
- Integrate interrelated functional programs derived from other component plans
- Relate mission planning to policies, programs, and specific projects for installation facilities
- Provide the basis for all decisions on siting of facilities and setting construction, repair, and renovation priorities
- Provide the basis for the preparation of the Dyess AFB Facility Development Plan

The overall goal of the Wing Infrastructure Development Outlook (WINDO) program is to provide a framework for programming, design and construction, and effective resources management to allow Dyess AFB to achieve its vision. A copy of the Dyess AFB WINDO is included in Appendix A. The following goals and objectives are tied to the WINDO program:

Goal: Ensure accomplishment of the 7 BW and 317 AG missions to develop and maintain operational capability for the B-1 fleet to deliver global power to theater commanders, and for the C-130 fleet to provide global airlift services.

Objectives:

- Provide facilities that enhance the 7 BW and 317 AG operational capabilities.
- Relate mission planning to policies, programs, and specific projects for facilities and systems.

SECTION ONE

Purpose and Need for Action

Goal: Take care of and recognize base personnel by promoting public health, safety, and overall quality of life.

Objectives:

- Promote a visually pleasing base through the implementation of architectural compatibility and landscape development;
- Continue Military Family Housing (MFH) modernization and improvement efforts; and
- Continue a systematic program to remove obstructions from the airfield environment.

Goal: Ensure that facilities and land uses are adaptable to and can expand to accommodate new missions, weapons systems, and training.

Objectives:

- Furnish quality facilities for personnel to live and work in; and
- Continue to modernize the installation so that essential facilities and services are available to carry out bombing and airlift/airdrop missions.

Goal: Provide for the force protection of the airfield and operational and control elements of the base.

Objectives:

- Implement flightline access measures;
- Enhance MFH access control measures;
- Improve security at installation access points (Tye and Main Gates); and
- Implement appropriate design features (walls, setbacks, etc.).

Goal: Ensure on-base land use and airspace is compatible with off-base communities, and maintain a close working relationship with local governments to ensure off-base development does not encroach upon the base.

Objectives:

- Continue cooperative land use partnerships with local governments; and
- Adhere to airfield clearance criteria when siting facilities.

Goal: Encourage an on-base development pattern which minimizes land use conflicts, consolidates like activities, and contributes to energy conservation and the efficient use of personnel and materials.

Objectives:

- Promote grouping of compatible activities and organizations;

- Reduce the number of facilities to only those that are mission essential;
- Site new facilities to optimize organizational functional relationships; and
- Shed excess infrastructure through facility demolition, mothballing, and leveraging under capacity through privatization, outsourcing, and other innovative partnerships.

Goal: Develop the best environmental program to ensure effective cleanup, compliance, and prevention, and partner with our neighbors to create community-enhancing programs.

Objectives:

- Continue Environmental Restoration Program (ERP) activities to cost-effectively reduce risks to human health and environment by having remedial systems in place as per established milestones.
- Actively manage the protection of the installation's cultural and natural resources.
- Implement planning, siting and design standards to minimize potential for adverse environmental impact.

1.3 PROGRAMMATIC PROCESS

The National Environmental Policy Act of 1969 (NEPA), the Council on Environmental Quality (CEQ) regulations implementing NEPA [40 Code of Federal Regulations (CFR) Parts 1500 through 1508], and the Air Force regulations for NEPA compliance (32 CFR Part 989; Air Force Instruction [AFI] 32-7061) direct the Air Force (AF) and other federal agencies to fully understand, and take into consideration during decision-making, the environmental consequences of proposed federal actions. Thereby, Dyess AFB must comply with NEPA on all major federal actions.

This Programmatic Environmental Assessment (PEA) covers typical actions as outlined in the WINDO. A Programmatic Finding of No Significant Impact (FONSI) will be executed for typical actions covered in this PEA that would not result in significant environmental impacts. For these projects, an AF Form 813 would be prepared, stating that the project, alternatives, potential impacts, and mitigation were reviewed and found to be fully and accurately described by the PEA and the PEA FONSI and no further documentation is required to comply with NEPA. A copy of AF Form 813 is included in Appendix B.

If a project is expected to create environmental impacts not described in the PEA; create impacts of a greater magnitude, extent, or duration than those described in the PEA; or require mitigation measures to keep the impacts below significant levels that are not described in the PEA; a Supplemental Environmental Assessment (SEA) and corresponding FONSI would be issued for that project. Projects for which it has been determined during the preparation of the SEA would require a more detailed environmental review, or projects that do not fit into the typology included in this PEA, will be subject to the standard Environmental Assessment (EA) or Environmental Impact Statement (EIS) process as required by NEPA and associated federal, state, and local statutes. A sample SEA is included in Appendix C.

This PEA applies to the projects described in the FY04 WINDO. This PEA also applies, at Dyess AFB's discretion, to other actions outside of WINDO projects that still fall under the scope of the actions described in Section 2. When a specific project is ready for decision, the appropriate Environmental Flight (CEV) personnel will review this PEA to determine if site-specific information is available and what level of environmental analysis and documentation would be appropriate at that time. If the level of analysis in the PEA is insufficient for the specific project, additional analysis would be tiered off of this PEA, in accordance with 40 CFR Part 1508.28.

1.4 PURPOSE AND SCOPE OF DOCUMENT

This PEA discusses potential environmental impacts associated with implementing various types of projects proposed in the Dyess AFB WINDO. This PEA also provides the public and decision-makers with the information required to understand and evaluate these potential impacts. In addition, the PEA addresses the need to expedite the NEPA review process for routine infrastructure projects in the interest of Dyess AFB's mission.

1.5 PURPOSE AND NEED

The Dyess AFB Vision is "preparing teams of Airmen to provide bombing, airlift support, formal training, and combat support...delivering rapid, decisive, and sustainable airpower to combat commanders anytime, anywhere..."

The Dyess AFB Vision is implemented through the comprehensive planning process, which seeks to rationalize the process by which decisions concerning land use, infrastructure development, and project sitings are made. The WINDO program incorporates the infrastructure development component into the Dyess AFB Vision.

Due to the dynamic nature of AF operations, infrastructure needs continually shift in response to changing AF requirements. Dyess AFB has identified a need to provide an infrastructure that would continue to support the base vision.

1.6 APPLICABLE REGULATORY REQUIREMENTS AND COORDINATION

1.6.1 Environmental Policy

NEPA (42 United States Administrative Code [U.S.C.] --4321 et seq.) established a national policy to encourage harmony between man and his environment, and to promote efforts to prevent, mitigate, or eliminate damage to the environment and stimulate the health and welfare of man. NEPA procedures ensure that environmental information related to federal action is made available to public officials and citizens, and that the environmental information, along with public input, is considered in the federal decision-making process.

Executive Order (EO) 11514, Protection and Enhancement of Environmental Quality, as amended by EO 11991, sets policy for directing the federal government in providing leadership

in protecting and enhancing the quality of the nation's environment. The CEQ Regulations (40 CFR - 1500 to 1508) implement the procedural provisions of NEPA. AFI 32-7061 establishes the specific AF procedural requirements for implementation of NEPA.

1.6.2 Biological Resources

The Endangered Species Act (16 U.S.C. --1531 to 1544) requires federal agencies to determine the effects of their actions on threatened and endangered (T&E) species of fish, wildlife, and plants, and their critical habitats, and take steps to conserve and protect these species. EO 11990, Protection of Wetlands, requires federal agencies to take action to avoid or minimize the destruction, loss, or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands.

1.6.3 Public Health

EO 12088, Federal Compliance with Pollution Control Standards, directs federal agencies to comply with federal, state, and local laws and regulations concerning air, water, and noise pollution, and hazardous materials and substances to the same extent as any private party.

1.6.4 Environmental Justice

EO 12898, enacted in 1993, requires that each federal agency make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations.

1.6.5 Floodplain Management

EO 11988, enacted in 1977, requires that each federal agency provides leadership and take action to reduce the risk of flood loss, minimize the impact of floods on human safety, health and welfare, and to restore and preserve the natural and beneficial values of floodplains. The federal agency is responsible for evaluating the potential impacts to floodplains of any action it may take. The implementation of NEPA with this PEA satisfies the AF responsibilities under this EO.

1.6.6 Section 106 Compliance

Cultural resources (archaeological and historical sites and structures) must be examined according to Section 106 of the National Historic Preservation Act of 1966 (NHPA) and implementing regulations at 36 CFR 800, in addition to review under NEPA. Significant historical and archaeological properties and sites that may be impacted by the proposed action or alternatives must be identified. Significant sites are defined as those listed on or determined eligible for listing on the National Register of Historic Places (NRHP).

1.6.7 Air Force Instruction 32-7061

AFI 32-7061 outlines the procedures and requirements for AF compliance with NEPA and other regulations during the environmental impact analysis process (EIAP). AFI 32-7061 describes the general compliance requirements, as well as instruction on how to prepare the various levels of environmental documentation.

This section describes the typical types of projects associated with the Dyess AFB WINDO, including the No Action Alternative. Table 1 lists all projects included in the fiscal year 2004 (FY04) WINDO, along with the level of NEPA analysis each project would require. Projects not covered by a categorical exclusion (CATEX) were used to develop the project categories described and evaluated in this PEA. A copy of the FY04 WINDO is included in Appendix A. Although the PEA does not explore the details of each individual project, each project type description includes examples of projects described in the FY04 WINDO.

2.1 NO ACTION ALTERNATIVE

Inclusion of the No Action Alternative is required under NEPA. The No Action Alternative is defined as maintaining the status quo with no WINDO projects being funded or completed. Under this alternative, necessary upgrades, additions, or demolition to existing structures may not be completed, which may account for existing structures no longer meeting the needs of the mission. No new structures would be funded or constructed as part of the WINDO, and the Dyess AFB Vision would not be fulfilled. Routine maintenance would continue to be performed under the No Action Alternative.

2.2 DEMOLITION PROJECTS

Due to the dynamic nature of Dyess AFB operations, operational requirements change, and existing buildings frequently do not meet the new needs. These buildings would require removal if upgrading, modifying, or retrofitting existing buildings would not be feasible or if the facility would be no longer needed. For the purposes of this PEA, demolition projects consist of decommissioning and demolishing existing buildings and ancillary equipment. The PEA assumes the following parameters are included in these types of projects:

- Qualified personnel would perform demolition, and equipment and demolition materials would be stored on previously disturbed land.
- All underground utilities would be removed, capped, or retrofit for future construction.
- All features of the structure would be removed, including the foundation. Ancillary structures, such as storage buildings, fences, and parking areas could also be removed.
- The worksite would be surrounded with orange mesh fence and appropriate signage during demolition activities to restrict unauthorized personnel.
- All demolition materials would be removed and disposed of off-site in an approved facility, in compliance with all applicable laws and regulations.
- Prior to demolition, all buildings would be surveyed for Asbestos-Containing Materials (ACM) and lead-based paint (LBP). If any ACM or LBP were present, abatement would be performed in accordance with local, state, and federal regulations.
- All fuel storage tanks and/or initial accumulation points (IAPs) for hazardous and petroleum waste would be removed prior to building demolition.

- Following all demolition activities, the area would be backfilled and compacted with clean topsoil, and graded to match adjacent contours. The area would be landscaped and revegetated according to the Integrated Natural Resources Management Plan (INRMP) (URS 2004a).

An example of a demolition project in the FY04 WINDO is the demolition of the Burger King building. The Burger King project would involve demolition of the 3,370 square foot restaurant located at 290 Theater Road (Building 7300). The building, including the reinforced concrete footings, would be entirely removed and the area backfilled and compacted with topsoil brought in from off-base. The utilities would be cut and capped so they can be reused for new construction.

2.3 CONSTRUCTION PROJECTS

For the purposes of this PEA, the base has been divided into three areas. Those areas are described as (1) Residential, (2) Developed, and (3) Non-Developed. The residential and developed areas are shown on Figure 3.

2.3.1 Driveways and Parking Areas

Access to buildings and other facilities is an important aspect of efficient AF operations. Currently, there is limited parking at various buildings throughout Dyess AFB. The projects evaluated in this category would include constructing new parking areas and driveway access points and would not include general repair or maintenance of existing surface features. Site grading may be required with these projects, and any clean fill needed would be obtained from an approved off-site source. Construction of new driveways and parking areas would be limited to residential and developed areas of the Base, as shown in Figure 3. The project would not be located in a wetland, floodplain, or other potentially sensitive environmental area. Parking areas would be constructed in a manner that would not interfere with existing storm water drainage systems.

2.3.2 Minimum Use Access Roads and Recreational Trails

Access to the undeveloped portion of Dyess AFB is limited to a few access roads, with some areas accessible only with off-road vehicles. This alternative would involve the construction of additional access roads and/or recreational trails (e.g., running, walking, bicycling) located throughout Dyess AFB. The analysis of this alternative does not include any buildings, training facilities, or structures of any kind that may be constructed in conjunction with an access road. Construction of all minimum use access roads and recreational trails would include the following components:

- Construction would not occur in a wetland or other sensitive environmental area.
- Construction may occur in developed, residential, or undeveloped portions of Dyess AFB, as shown in Figure 3. Construction in undeveloped portions of Dyess AFB would be limited to two acres. Construction in residential or developed portions of Dyess AFB would not be subject to this limitation.

- Fill material required for the construction of an access road or recreational trail would be obtained from an approved off-base source or from a designated on-base stockpile.
- Surface covering of the completed road or trail could consist of grass, dirt, gravel, mulch, asphalt, or concrete.
- Following construction activities, all disturbed areas would be revegetated according to the INRMP (URS 2004a).
- A Texas Pollutant Discharge Elimination System (TPDES) permit would be obtained if the disturbed area would encompass more than one acre.

2.3.3 Temporary Aircraft Transfer Path

Dyess AFB has a static display (air park) showcasing past and present aircraft. Aircraft to be displayed would be towed from the flightline to the static display area via existing roads and a temporary transfer path through areas without accessible roadways (Figure 4). The temporary transfer path would be constructed along the designated route by removing vegetation (e.g., mowing, hand clearing, mechanical grubbing, etc.), which would allow for the safe transport of aircraft to the static display. The temporary transfer path would be approximately 175 feet wide, and 11,000 feet in length. Since the total amount of disturbed area would be approximately 44 acres, a TPDES permit would be obtained with this alternative.

Surface covering of the temporary taxiway would consist of existing grass vegetation or dirt. The temporary taxiway would be a single-use structure that would be allowed to return to the pre-project state upon completion of the aircraft transfer.

2.3.4 Residential Structures

The MFH area contains 992 housing units divided into three areas: east, west, and south. In all three areas, the units are a mix of two-, three-, and four-bedroom duplexes and single-family homes. Base housing was originally built in 1957, and was expanded in 1996. The FY04 WINDO lists replacement of base housing units as potential construction projects. Replacement of a base housing unit with new base housing unit would qualify for a Categorical Exclusion. However, constructing new base housing units where the land did not previously function as housing would not be categorically excluded. Construction of residential structures under this alternative assumes:

- New housing unit would be adjacent to existing MFH areas and still located in the residential area shown on Figure 3.
- New MFH area would not be located in an area formerly containing ERP sites or any other property that would have deed restrictions for past or present contamination.
- Construction would not occur in a wetland, floodplain, or other sensitive environmental area.
- All necessary underground utilities would be brought to the facility from existing lines.
- The worksite would be surrounded with orange mesh fence and appropriate signage to restrict unauthorized personnel.

- Pre-construction site grading and earthwork may be required. Fill material would be obtained from an approved off-base source or from a designated on-base stockpile.
- Additional streets and driveways needed for new MFH areas would be connected to existing streets in the MFH areas.
- A TPDES permit would be obtained if the disturbed area would encompass more than one acre.

2.3.5 Recreational and Base Support Facilities

Morale, Welfare, and Recreation (MWR) is an important aspect of Dyess AFB operations. MWR provides basic community support programs that support the military mission by satisfying the basic physiological and psychological needs of military members and their families. Dyess AFB places a high priority on MWR activities, and has several facilities (golf course, football fields, etc.) that can be utilized by the base community. To support the whole neighborhood concept in the housing area, new neighborhood playgrounds and recreation areas would be constructed as part of the WINDO program.

Many recreational projects included for analysis in this classification do not require construction of a building. However, some structures such as fencing, sidewalks, and other features may be constructed at the recreational facility. Examples of these projects included in the FY04 WINDO are the construction of a batting cage and a mini-golf course. These projects will generally involve minimal (less than 1 acre) ground disturbance.

In addition to recreational areas, base support facilities provide retail and commerce outlets to base residents. Projects in this classification will require construction of a building and ancillary structures. Typical ancillary structures that would be expected may include fencing, sidewalks or walking paths, and other contributory features. Examples of these projects included in the FY04 WINDO are the construction of a golf course clubhouse and cart barn, and the construction of a mini mall. General components of these recreational and base support projects include:

- Structures would be located in areas designated as residential or developed on Figure 3.
- The construction site would not be located in a floodplain, wetland, or other sensitive environmental area.
- Surrounding land use would be compatible with the recreational or base support facility.
- All necessary underground utilities would be brought to the facility from existing lines.
- The worksite would be surrounded with orange mesh fence and appropriate signage to restrict unauthorized personnel.
- Pre-construction site grading and earthwork may be required. Fill material would be obtained from an approved off-base source or from a designated on-base stockpile.
- Following construction activities, the disturbed area would be revegetated according to the INRMP (URS 2004a).

- A TPDES permit would be obtained if the disturbed area would encompass more than one acre.

2.3.6 Mission Support Facilities

Dyess AFB develops and maintains operational capability for the ACC's largest B-1 Bomber Wing. The 7 BW delivers global power to support combatant commander taskings for the joint and combined application of conventional airpower – produces combat-ready aircrews in the AF's only formal B-1 training unit – and provides operations, maintenance, and medical mission support for the base.

This project type category includes construction projects that would ensure the accomplishment of 7 BW and 317 AG missions by developing and maintaining operational capabilities of the B-1 and C-130 fleets. Examples of these project types that were included in the FY04 WINDO are construction of a fire station, the consolidated support facility, and the refueling vehicle maintenance shop.

Projects in this classification would require construction of buildings and ancillary structures. General components of these projects include:

- Structures would be constructed in areas identified as developed on Figure 3.
- The construction site would not be located in a floodplain, wetland, or other sensitive environmental area.
- The facility would be located in the developed portion of Dyess AFB, and would be compatible with surrounding land use.
- All necessary underground utilities would be brought to the facility from existing lines.
- The worksite would be surrounded with orange mesh fence and appropriate signage to restrict unauthorized personnel.
- Pre-construction site grading and earthwork may be required. Fill material would be obtained from an approved off-base source or from a designated on-base stockpile.
- Following construction activities, the disturbed area would be landscaped and revegetated according to the INRMP (URS 2004a).
- If the facility would include any petroleum product storage tanks, all appropriate spill control procedures would be implemented according to the Environmental Protection Agency (EPA) One Plan.
- If the facility would include any IAPs for hazardous and petroleum wastes, the IAP would be managed according to the procedures outlined in the Dyess AFB Integrated Waste Management Plan (IWMP) (URS 2004b). In addition, any tank with a capacity greater than 1,100 gallons would be registered with the Texas Commission on Environmental Quality (TCEQ) Petroleum Storage Tank Division.
- A TPDES permit would be obtained if the disturbed area would encompass more than one acre.

2.3.7 Utility Extensions

Dyess AFB is served by both aboveground and underground utilities. This alternative includes future proposed projects that would involve upgrading and expanding utilities servicing Dyess AFB. Proposed utility systems located in an existing right-of-way (ROW) would be subject to a CATEX. This alternative evaluates those actions that would include construction of underground and aboveground utilities outside of existing ROWs in areas throughout Dyess AFB.

In general, aboveground utilities construction would include the placement of utility poles and overhead electrical lines. These actions would involve ground disturbance in the immediate vicinity of the utility pole location.

Underground utility construction would include trenching, excavating, and horizontal boring methods. Regardless of construction method, all disturbed areas would be backfilled, compacted, and revegetated according to the INRMP (URS 2004a). The following components would be included with utility extension actions:

- Aboveground structures would not be located a floodplain, wetland, or other sensitive environmental area.
- Wetlands would be avoided to the extent feasible. If a wetland could not be avoided by the utility extension, horizontal boring would be utilized to install the utility beneath the wetland.
- Horizontal boring techniques would be utilized if the utility extension would involve crossing a roadway.
- A TPDES permit would be obtained if the disturbed area would encompass more than one acre.

2.4 STORMWATER MANAGEMENT

Stormwater management projects at Dyess AFB would include repairing or stabilizing embankments, installing culverts, and upgrading drainage ditches. During construction, Best Management Practices (BMPs) would be employed to reduce soil erosion and prevent or reduce sedimentation. Heavy equipment would normally be operated from an adjacent road, bank, or other feature; although it may be necessary in some cases to operate the equipment in the channel. In this instance, the waterway may need to be temporarily diverted using a pipe or secondary channel. The goal of these projects is to reduce the flood hazard to adjacent land and provide for efficient conveyance of stormwater through Dyess AFB. Existing stormwater systems would be enhanced to allow for a more efficient conveyance of water through the base. The conveyance channels would include drainage swales, earthen channels, concrete channels, or subsurface concrete pipes.

The installation of culverts may consist of corrugated metal pipes (CMP), reinforced concrete pipes (RCP), or reinforced concrete box culverts. Installation of culverts would follow the existing drainage or roadways, as appropriate. The capacity of the culvert crossing may be

increased to reduce the risk of flooding to the surrounding area, or the culvert may be modified to prevent overtopping.

Typical projects may include:

- Increasing the size of the culvert or adding additional culvert barrels
- Changing the type of culvert
- Changing the location or alignment of the culvert
- Adding features, such as a headwall, discharge apron, or riprap to reduce the potential for erosion or damage to the culvert or crossing
- Replacing fill material
- Stabilizing embankment with rock riprap
- Installing retaining walls or geotextile fabrics
- Using bioengineering techniques, such as vegetation plantings

Any action that impacts a natural waterway, alters vegetation adjacent to a stream corridor, or impacts a floodplain would require coordination with the U.S. Army Corps of Engineers (USACE), U.S. Fish and Wildlife Service (USFWS), TCEQ, and the Texas Parks and Wildlife Department (TPWD). If the action would involve channel modifications, changes to culvert capacity, or the installation in attenuation structures, a hydraulic/hydrologic analysis could be required to evaluate the potential impacts on downstream flows. A TPDES permit would be obtained if the disturbed area would encompass more than one acre.

2.5 ALTERNATIVE ACTIONS

2.5.1 Modify Existing Buildings

As mission and support requirements change, buildings may no longer fit the need of the new operation. This alternative involves modifying an existing building so it would be suitable to perform the new functions. In cases where modification of an existing building would not accommodate the new operation, this alternative would not be feasible. However, this discussion focuses on those instances where modification of a building would be a reasonable alternative to construction of a new facility. Modification of an existing building would involve renovation of the building, construction of additional features (e.g., ancillary buildings), and building expansion.

Building expansion would occur on land that has been previously disturbed during the construction of the existing building. All building expansion projects would be performed in the developed area of Dyess AFB, as shown in Figure 3. Existing utilities would continue to be utilized by the facility, although some upgrades may be necessary. Temporary displacement of personnel and services may be required during the construction period.

Ancillary buildings included with this alternative would include the following components:

- The construction site would not be located in a floodplain, wetland, or other sensitive environmental area.
- The facility would be located in the developed portion of Dyess AFB, and would be compatible with surrounding land use.
- All necessary underground utilities would be brought to the facility from existing lines.
- The worksite would be surrounded with orange mesh fence and appropriate signage to restrict unauthorized personnel.
- Pre-construction site grading and earthwork may be required. Fill material would be obtained from an approved off-base source or from a designated on-base stockpile.
- Following construction activities, the disturbed area would be landscaped and revegetated according to the INRMP (URS 2004a).
- If the facility would include any petroleum product storage tanks, all appropriate spill control procedures would be implemented according to the EPA One Plan.
- If the facility would include any IAPs for hazardous and petroleum wastes, the IAP would be managed according to the procedures outlined in the Dyess AFB IWMP (URS 2004b). In addition, any tank with a capacity greater than 1,100 gallons would be registered with the TCEQ Petroleum Storage Tank Division.
- A TPDES permit would be obtained if the disturbed area would encompass more than one acre.

This chapter describes the human and natural environment at Dyess AFB, providing information to allow for the evaluation of potential environmental impacts that could result from the alternatives described in Section 2.

3.1 CLIMATE AND METEOROLOGY

Dyess AFB is located in the semiarid region of west-central Texas. In general, winters are mild with low temperatures averaging between 27 and 32 degrees Fahrenheit. Summers are warm and dry, with average high temperatures ranging between 91 and 95 degrees Fahrenheit. Precipitation generally occurs April through December, with mean annual precipitation averaging 23.78 inches (NOAA 2004). The area is relatively windy and, during most of the year, the wind generally comes from the south averaging 7 to 20 knots (NOAA 2004).

3.2 TOPOGRAPHY

Dyess AFB is located adjacent to and west of the city of Abilene in Taylor County, Texas, at 32 degrees 26 minutes North and 99 degrees 51 minutes West and has a field elevation of 1,789 feet mean sea level (msl) (Figure 1). The base is nearly level to gently sloping upland flats with elevations ranging from 1,796 feet msl at the southwest corner of the base to approximately 1,733 feet msl at the northeastern corner. Slopes generally range from 0 to 3 degrees. It lies on the southwestern portion of the rolling plain of north central Texas and is 60 miles northeast of the Edwards Plateau. With the exception of a cap rock escarpment (cliff separating two level areas), the region is generally level to gently rolling. This escarpment is oriented north-northeast and south-southwest for approximately 110 miles west to northwest of Dyess AFB, separates the rolling plain from the higher western Llano Estacada, and merges with the Edwards Plateau just west of Dyess AFB.

3.3 GEOLOGY AND SOILS

3.3.1 Geology

Primary shallow geological deposits, underlying the near surface material, are quaternary alluvium (sedimentation build-up of silts, sands and gravel over thousands of years). Much of the base overlays ancient streambed channels and tributaries of Little Elm Creek. Bedrock under the base consists of the Upper Permian Vale Formation (valley) of the Clear Fork Group. This is a broad band of relatively flat-lying red shale with thin scattered lenticular red and gray sandstone in the lower sections. Bedrock is 100 to 200 feet thick and generally slopes toward the northeast. Groundwater flow direction is not consistent, and varies throughout the base.

This base is underlain by the Permian Clear Fork Group and Quaternary Alluvium. The Clear Fork Group consists mostly of silty mudstones, thin to very thinly bedded, with some blue-gray shale near the base, and a few fossil plant fragments. The Alluvium consists of floodplain deposits of low terraces and bedrock located in stream channels. Alluvial thickness is up to 25 feet (TPWD 1994).

3.3.2 Soils

Dyess AFB soils are primarily members of the Sagerton-Rowena-Rotan association, which are deep noncalcareous to calcareous clay loams (SCS 1976). This association occurs on lands that are nearly level to gently sloping and comprises up to 45 percent of the soils in Taylor County. Sagerton soils are deep, nearly level to gently sloping, well-drained, loamy soils that formed in calcareous loamy sediment. At Dyess AFB, these occur on broad uplands with slopes of 0 to 1 percent, or as urban complexes with slopes of 0 to 3 percent. Rowena soils consist of deep, flat to gently sloping, well-drained, loamy soils that formed in calcareous clayey to loamy sediments. The Rowena soil that occurs on Dyess AFB is an urban complex with 0 to 1 percent slopes. Rotan soils are deep, nearly level to gently sloping, well-drained soils of uplands. They were formed in calcareous sediment. Slopes range from 0 to 3 percent.

Other soil series found on base include Gageby, Hamby, Mangum, Randall, Tobosa, and Vernon. The Gageby series soils are deep, nearly level, well-drained, loam soils on bottomlands. They typically occur on the floodplain associated with Little Elm Creek. Hamby soils are deep, nearly level to gently sloping, well-drained, loamy and sandy soils of uplands with slopes of 0 to 3 percent. Mangum soils consist of deep, nearly level, well to moderately drained clayey soils of floodplains. The soils were formed in clayey alluvium. Mangum soils on Dyess AFB are nearly level and are confined to the floodplain of Little Elm Creek. Randall soils occur in the bottoms of enclosed depressions and intermittent lakes or playas. They are deep, nearly level, and poorly drained. Tobosa soils consist of deep, nearly level to gently sloping, well-drained, clayey soils on uplands. At Dyess AFB, these soils are associated with concave areas of uplands with 0 to 15 percent slopes, or metropolitan areas with 0 to 3 percent slopes. Vernon soils are moderately deep, gently to strongly sloping, well-drained, clayey soils on uplands. They formed in calcareous clayey shale. The Vernon soil on site has slopes of 1 to 3 percent and occurs on convex upland ridges (TPWD 1994; SCS 1976).

Randall clay is classified as a Hydric Soils Criteria Code 3 by the U. S. Department of Agriculture Soil Conservation Service (SCS) (1993). Rotan clay loam, Rowena clay loam, and Tobosa clay inclusions are also classified as a Hydric Soils Criteria Code 3 by the SCS ponding criteria (SCS 1993). The local landforms are depressions that are frequently ponded for long or very long duration during the growing season (SCS 1976; 1993).

The wetlands delineation report (USACE 1995) indicated that areas of Colorado, Gageby, and Weymouth soils also exhibited properties of hydric soils.

Figure 2 shows the Dyess AFB Soils map. This figure shows not only the major soil components on Dyess AFB, but also small areas of other soil types.

3.4 PUBLIC HEALTH AND SAFETY

Dyess AFB employs over 5,450 people; including approximately 5,125 active military and family members on base, and approximately 330 civilians. In addition to the active and civilian employees, Dyess AFB is also host to several temporary and full-time contractors.

Dyess AFB is served by a fire brigade, military police, and the 7th Medical Group (7 MDG). Dyess AFB has a hospital and dental clinic; however, the Dyess Hospital does not provide emergency services. Emergency cases are transported to the Abilene Regional Medical Center.

3.5 SOCIOECONOMICS/ENVIRONMENTAL JUSTICE

Dyess AFB is an active military base, whose residents are nonpermanent officers and enlisted personnel. For purposes of environmental justice, there are no low-income or minority populations located on base.

3.6 NOISE

Sounds disrupting normal activities or otherwise diminishing the quality of the environment are designated as noise. Noise events that occur during the night (10 p.m. to 7 a.m.) are more disruptive than those that occur during normal wake hours (7 a.m. to 10 p.m.). Noise events within the project vicinity are presently associated with climatic conditions (wind, thunder, etc.), aircraft operation, and transportation noise (traffic).

The B1-B and C-130 are the principal aircraft operating from Dyess AFB. Daily operations of the B1-B average at 180 patterns, and C-130 operations average 90 per day. An operation includes one take-off, one landing, or half a closed pattern. In addition to these assigned aircraft, numerous transient aircraft from other military installations land and take-off from Dyess AFB. The Air Installations Compatible Use Zones (AICUZ) noise contours are shown in Figure 5. Much of the developed areas are located in the 75 to 80 decibel (dB) zone, while the residential area is located in the 75 dB or less zones.

3.7 AIR QUALITY

The National Ambient Air Quality Standards (NAAQS) established by the EPA, pursuant to the Clean Air Act as amended and adopted by the TCEQ, define the allowable concentrations of pollutants that may be reached but not exceeded in a given time period to protect human health (primary standard) and welfare (secondary standard) with a reasonable margin of safety. These standards include maximum concentrations for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, lead, and particulate matter with a diameter of 10 microns or less. Dyess AFB is classified as an NAAQS Attainment Area (EPA 2004).

3.8 WATER RESOURCES

Dyess AFB is located in the semiarid region of west-central Texas. The area is generally dry, with summer precipitation coming as cellular and highly intense thunderstorms. Surface water streamflow in this area corresponds greatly with precipitation events. During summer months, most streams experience periods of low or no base flow. However, during spring and winter months, the streamflow is generally higher and more constant.

3.8.1 Surface Water

Little Elm Creek flows through Dyess AFB. The drainage basin is 39.1 square miles, and flows from the headwaters in the low mountains southwest of Dyess AFB to its confluence with Big Elm Creek, northeast of Dyess AFB. Little Elm Creek has been channelized to form a drainageway through Dyess AFB. There are two unnamed drainage tributaries to Little Elm Creek located on Dyess AFB property. One tributary, which flows into Lake Totten on the golf course, drains the southeastern portion of the base, including the housing area, drop zone, and golf course. Lake Totten is a shallow man-made recreational water body and has a surface area of approximately 10 acres when full. When the lake is full, water exits over a spillway at the east end into Little Elm Creek. The second tributary drains the northern and northwestern portion of Dyess AFB and flows directly into Little Elm Creek. Little Elm Creek is a gaining stream as it flows through Dyess AFB, meaning the base flow of the creek is enhanced by the contribution of groundwater.

Surface water flow direction is readily discernible and controlled by man-made ditches and channels. Surface water from the industrial portion of Dyess AFB sheet flows off the flightline and other areas to be captured by the stormwater drains and diversion ditches channeled to flow into Little Elm Creek, which discharges into Big Elm Creek approximately 4 miles downstream, northeast of Dyess AFB. Big Elm Creek then discharges into Lake Fort Phantom Hill located north of Abilene, and is considered suitable for recreational use, fish and wildlife propagation, and domestic use. Lake Fort Phantom Hill is the principle source of potable water supply for Abilene and Dyess AFB.

Two storage ponds are located on base to supply the effluent irrigation system. One pond is located in the central portion of the golf course and covers roughly 4.5 acres with a capacity of 9 million gallons. The second is located east of the hospital and south of the picnic grounds and covers approximately 2.75 acres. This pond has a capacity of nearly 13 million gallons. Water levels are maintained at a fairly constant level by a pipeline feed from the city of Abilene.

3.8.1.1 Surface Water Quality

The city of Abilene and Dyess AFB obtain much of their municipal water supply from Lake Fort Phantom Hill. Therefore, the State of Texas water quality regulations require that point-source discharges into streams draining into Lake Fort Phantom Hill must not degrade the quality of the water in the reservoir below the established water quality standards.

3.8.2 Groundwater

Groundwater supplies are limited in west-central Texas, as there are no aquifers of regional significance in the area. The principal near-surface source of groundwater at Dyess AFB is the Quaternary Alluvium of Little Elm Creek. The groundwater in the Quaternary Alluvium is typically unconfined, although it may be locally semiconfined where the groundwater surface is above the top of the sand and gravel alluvium. The saturated thickness of the alluvium ranges from a few feet to a maximum of about 12 feet. The shallow Vale Formation red shale underlying the alluvium appears to be an aquitard, which prevents shallow groundwater from

being transported vertically down. During dry periods, base flow to Little Elm Creek and the northern drainage ditch is likely sustained by groundwater discharge from the alluvium. During wet periods when flow is high, Little Elm Creek and the northern drainage ditch are likely recharging the alluvium.

3.8.3 Floodplains

Floodplain determinations at Dyess AFB are shown in Figure 6. Dyess AFB does not participate in the Federal Emergency Management Agency (FEMA) National Flood Insurance Program (NFIP), but does comply with EO 11988, Floodplain Management. EO 11988 requires federal agencies to "...evaluate the potential effects of any actions it may take in a floodplain; to ensure that its planning programs and budget request reflect consideration of flood hazards and floodplain management..."

3.9 BIOLOGICAL RESOURCES

3.9.1 Wetlands

Wetland determinations at Dyess AFB were performed on location in accordance with the USACE "Wetland Delineation Manual." A total of 12 jurisdictional wetlands on Dyess AFB was identified and mapped (USACE 1995) (Figure 7). Four of the wetlands were primarily associated with the southwest tributary to Little Elm Creek. Eight wetlands were categorized as human induced wetlands occurring through soil manipulation or were dug as stock watering tanks by ranchers prior to existence of the base. These depressions are expected to eventually fill, breach and erode, returning the areas to floodplains. Other areas are known to exhibit some wetland characteristics, though not enough for jurisdictional delineation (USACE 1995).

3.9.2 Vegetation

Vegetation at Dyess AFB consists of developed areas, mesquite woodland, short (mowed) grass, and tall grass. The developed areas occupy approximately 20 percent of Dyess AFB, and include a mixture of lawns, trees, and other landscaping plants.

Approximately 20 percent of Dyess AFB is classified as mesquite woodland. This area is primarily on the periphery of the base and south of the southern drainage ditch. The mesquite trees are 15 to 20 feet tall with an understory of grasses. The largest mesquite trees are located on the golf course. Mistletoe is abundant in the trees, and prickly pear is common as an understory species in some areas. The mesquite woodlands appear to have developed through secondary succession on former agricultural land.

Short grass covers about 2,465 acres (25 to 30 percent) of Dyess AFB, and includes regularly mowed and landscaped areas. The predominant turf grass is common bermuda (*C. dactylon*), shrubs are usually red tip photinia (*Photinia fraseri*) and holly (*Ilex spp.*), while trees are most often fruitless mulberry (*Morus sp.*), green ash (*Fraxinus pennsylvanica*), live oaks (*Quercus rubra*), red oaks (*Quercus sp.*), pecan (*Carya sp.*), bur oaks (*Quercus macrocarpa*), mesquite (*Prosopis sp.*), Afghan pine (*Pinus eldarica*) and desert willow (*Chilopsis linearis*).

Tall grass covers approximately 20 percent of Dyess AFB, but the areas may vary from year to year. The species appear to be similar to those occupying the short grass areas, with the addition of Johnson grass (*Sorghum halepense*), Texas wintergrass (*Stipa leucotricha*), and switchgrass (*Panicum virgatum*). Forbs are also common in many areas.

3.9.3 Threatened and Endangered Species

There are no federally-listed T&E species known to be permanent residents at Dyess AFB. The bald eagle (a threatened species), and the endangered whooping crane, interior least tern, and black-capped vireo all have the potential to visit the area. However, according to the INRMP (URS 2004a), the habitat for these bird species does not exist on base.

The Texas horned lizard (*Phrynosoma cornutum*) is listed as a State-threatened species. The lizard's range includes Texas, Oklahoma, Kansas, New Mexico, Colorado and parts of Arizona and Mexico. Its habitat consists of open, sandy to gravelly grasslands and deserts which support grass, mesquite, and cactus. Potential habitat for this species exists in most parts of the base. The preferred diet of the Texas Horned Lizard is the harvester ant, which are located throughout the base. A roadkill was observed by Parsons Engineering-Science biologists during surveys conducted on April 28, 1995, and the lizard is seen sporadically by base employees. Due to the presence of the Texas horned lizard and its habitat on base, Dyess AFB has placed specific management issues for this species in the INRMP (URS 2004a).

3.9.4 Terrestrial Wildlife

Mammalian fauna present on Dyess AFB are typical of an urban environment and include cottontail (*Sylvilagus* sp.), coyote (*Canis latrans*), fox squirrel (*Sciurus niger*), black-tailed jackrabbit (*Lepus californicus*), and gray woodrat (*Neotoma micropus*). A wide variety of birds species have been observed on Dyess AFB, including red-tailed hawk (*Buteo jamaicensis*), Swainson's hawk (*Buteo swainsoni*), vesper sparrow (*Pooecetes gramineus*), mourning dove (*Zenaida macroura*), northern bobwhite (*Colinus virginianus*), wild turkey (*Meleagris gallopavo*), golden-fronted woodpecker (*Melanerpes aurifrons*), ladder-backed woodpecker (*Picoides scalaris*), scissor-tailed flycatcher (*Tyrannus forficatus*), and red-winged blackbird (*Agelaius phoeniceus*). Low habitat diversity and availability preclude a high diversity and abundance of reptiles and amphibians. Those species with relatively wide niche breadth such as red-eared sliders (*Trachemys scripta elegans*) and bullfrogs (*Rana catesbeiana*) are abundant. Other species observed on Dyess AFB include the common snapping turtle (*Chelydra serpentina*), diamondback water snake (*Nerodia rhombifer rhombifer*), western diamondback rattlesnake (*Crotalus atrox*), bull snake (*Pituophis melanoleucus sayi*), Texas rat snake (*Elaphe obsoleta lindheimeri*), and pallid spiny softshell turtle (*Apalone spiniferus pallidus*).

3.9.5 Aquatic Resources

There are no fish in Little Elm Creek or either of the drainage ditches located on Dyess AFB. However, Little Elm Creek drains into Big Elm Creek, which then drains into Lake Fort Phantom Hill. This lake provides habitat for many aquatic species and is used for recreation (fishing) by residents of the area. Dyess AFB currently has no recreational fishing on base,

which relieves the TPWD of the responsibility of stocking Lake Totten. There are no known T&E aquatic species on Dyess AFB (URS 2004a).

3.10 CULTURAL RESOURCES

According to the Integrated Cultural Resources Management Plan (ICRMP) (URS 2004c), Dyess AFB has been surveyed and no historic or significant archaeological resources have been found on base. The ICRMP does not define any cultural resource management objectives at Dyess AFB.

3.11 HAZARDOUS MATERIALS AND WASTES

The American Society for Testing and Materials (ASTM) (1994) Standard E 1527-94 defines a recognized environmental condition as “the presence or likely presence of any hazardous substance or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of release of any hazardous substance or petroleum products into structures on the property or into the ground, groundwater, or surface water of the property.”

Dyess AFB has facilities that may produce hazardous wastes or petroleum products, including the base service station, aircraft hangar and flightline, and vehicle motor shops. Information on these facilities and the hazardous materials and waste programs are detailed in the IWMP (URS 2004b) and the Integrated Materials Management Plan (IMMP) (URS 2005a). Hazardous materials and wastes at Dyess AFB are managed by contractor (TopFlite). Hazardous waste is temporarily stored in IAPs at each shop that produces hazardous waste. Dyess AFB has two 90-day storage areas for hazardous waste.

ACM and LBP are found in several buildings at Dyess AFB. CEV and Bioenvironmental Engineering (BEE) are responsible for managing these programs. ACM and LBP are periodically re-surveyed to determine if any treatment or abatement measures would be required.

3.12 ENVIRONMENTAL RESTORATION PROGRAM

The AF ERP policy was implemented on January 21, 1982 under the title “Installation Restoration Program”. The records search (Preliminary Assessment [PA]) report was completed in July 1985. The Remedial Investigation (RI) was initiated in 1987; the RI final report was approved in 1996. The base received a signed permit in April 2003, and a signed Compliance Plan in April 2003. Of the original 43 ERP sites investigated, 37 have been closed with the approval of the TCEQ. Only six sites remain active in the compliance monitoring program. The current ERP status for Dyess AFB is detailed in the Dyess AFB Management Action Plan (Dyess AFB 2003).

3.13 CUMULATIVE IMPACTS

Cumulative impact is defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonable foreseeable future actions.” Cumulative effects are not wholly different effects from direct or indirect effects of an action. Cumulative effects are merely a way of placing seemingly isolated or insignificant direct and indirect effects in context with respect to overall impacts, both over time and in an area larger than that evaluated for direct and indirect effects. Cumulative effects are discussed as being additive, synergistic, or reductional.

This chapter discusses the potential for significant impacts to the environmental resources described in Section 3 as a result of implementing the project alternatives described in Section 2.

4.1 DEMOLITION PROJECTS

4.1.1 No Action Alternative

4.1.1.1 Climate and Meteorology

The No Action Alternative would not impact climate or meteorology.

4.1.1.2 Topography

The No Action Alternative would not impact topography.

4.1.1.3 Geology and Soils

The No Action Alternative would not impact geology or soils.

4.1.1.4 Public Health and Safety

Although the No Action Alternative would not include any building demolition, the obsolete building would continue to receive routine maintenance and required repairs. Therefore, the building would not pose a risk to public health or safety.

4.1.1.5 Socioeconomics/Environmental Justice

There are no socioeconomic or Environmental Justice issues at Dyess AFB.

4.1.1.6 Noise

The No Action Alternative would not impact noise.

4.1.1.7 Air Quality

The No Action Alternative would not impact air quality.

4.1.1.8 Water Resources

The No Action Alternative would not have an impact on surface water or groundwater. All equipment stored outside the building would be subject to the procedures outlined in the Dyess Storm Water Pollution Prevention Plan (SWPPP) (Dyess AFB 2002). No additional activities would be performed that would impact the function of the floodplain.

4.1.1.9 Biological Resources

Wetlands

The No Action Alternative would not impact any wetlands at Dyess AFB.

Vegetation

The No Action Alternative would not impact any vegetation at Dyess AFB.

Threatened and Endangered Species

The No Action Alternative would not impact any threatened or endangered species at Dyess AFB.

Terrestrial Wildlife

The No Action Alternative would not impact wildlife at Dyess AFB.

Aquatic Resources

The No Action Alternative would not impact aquatic species at Dyess AFB.

4.1.1.10 Cultural Resources

The No Action Alternative would not impact cultural resources. There are no historic structures located at Dyess AFB.

4.1.1.11 Hazardous and Toxic Materials and Wastes

The No Action Alternative would not impact any hazardous materials. ACM and LBP found in the building would continue to be monitored and abatement activities would be required if the ACM or LBP became damaged.

4.1.1.12 Environmental Restoration Program

The No Action Alternative would not impact the ERP.

4.1.1.13 Cumulative Impacts

The No Action Alternative would not produce any cumulative impacts greater in scope or magnitude than those described for each individual environmental resource.

4.1.2 Demolition Projects

4.1.2.1 Climate and Meteorology

Demolition of structures would not impact climate or meteorology.

4.1.2.2 Topography

Following the removal of the building, the area would be graded to match existing contours. This would not have a significant impact on the topography of the immediate area.

4.1.2.3 Geology and Soils

Demolition of structures would not impact geology. A temporary impact to local soils would be experienced during demolition. All impacts resulting from operating heavy machinery and removing demolition debris would be localized and temporary. BMPs (e.g., watering down the work area) would be utilized during demolition activities if dust and wind erosion were to become a problem. After the structures are removed, the area would be graded to existing contours and revegetated. There would not be any long-term impacts to soil.

4.1.2.4 Public Health and Safety

All work sites would be surrounded by orange mesh fence to limit access to authorized personnel. In addition, Dyess AFB is a restricted access facility and this action would not impact emergency services. Therefore, no adverse impacts on public health or safety would be expected with any demolition activities.

4.1.2.5 Socioeconomics/Environmental Justice

There are no socioeconomic or Environmental Justice issues at Dyess AFB. This alternative may result in minor beneficial economic impacts to the area by providing employment opportunities to local contractors.

4.1.2.6 Noise

There may be a temporary increase in noise levels in the immediate project area during demolition activities. This impact would be limited to daytime work hours. Since Dyess AFB is an active military base with daily airfield operations (landings and takeoffs), a temporary, localized increase in noise would not result in a significant adverse impact to the base community. Demolition activities would not impact the Dyess AFB AICUZ guidelines.

4.1.2.7 Air Quality

Short-term, localized impacts to air quality may result from demolition activities. Impacts would likely result from fossil fuel use, particulate emissions from soil disturbance, and use of materials containing volatile organic compounds (VOCs). Fossil fuel emissions would produce carbon monoxide, nitrogen oxides, sulfur dioxide, and hazardous pollutants. BMPs would be utilized to

reduce any particulate emissions. All impacts would be temporary and would not result in a significant environmental impact.

4.1.2.8 Water Resources

Demolition of structures would not impact surface water hydrology or groundwater resources. There is the potential that surface water quality would be impacted from the operation and storage of heavy machinery or disturbance of soils. BMPs, including silt fences and hay bales, would be employed to reduce any potential erosion. Following completion of the demolition activities, the area would be landscaped and revegetated to reduce long-term impacts associated with soil erosion.

This alternative would not produce adverse impacts to the floodplain at Dyess AFB.

4.1.2.9 Biological Resources

Wetlands

No demolition materials would be stored or disposed of in wetlands. Therefore, these projects would not impact any wetlands at Dyess AFB.

Vegetation

Following the demolition of structures, the area would be landscaped and revegetated according to the INRMP. This would have a positive impact on vegetation.

Threatened and Endangered Species

No impact on threatened or endangered species. All activities would be conducted in accordance with the Texas horned lizard management procedures outlined in the INRMP (URS 2004a).

Terrestrial Wildlife

These project types would not impact wildlife at Dyess AFB.

Aquatic Resources

Demolition of structures would not impact aquatic species at Dyess AFB.

4.1.2.10 Cultural Resources

No buildings at Dyess AFB are considered historical structures. Therefore, demolition of structures would not impact cultural resources.

4.1.2.11 Hazardous and Toxic Materials and Wastes

All hazardous materials and IAPs would be removed from the facility prior to initiation of demolition activities. All useable hazardous materials would be collected by TopFlite, and hazardous wastes would be taken to the 90-day facility before final disposal.

Prior to demolition, a review and survey of the building would be performed to determine the extent of ACM and LBP. All ACM would be abated prior to demolition in accordance with the Integrated Toxic Substances Control Act Plan (URS 2004d).

4.1.2.12 Environmental Restoration Program

Demolition of structures would not impact the ERP. If any structures proposed for demolition were located on an active ERP site, precautions would be taken to minimize potential health effects to workers. All removed material would be evaluated to determine the proper disposal. Mitigation measures would be utilized to ensure migration of contaminants would not occur.

4.1.2.13 Cumulative Impacts

Building demolition would correspond with changing mission requirements. Because of this, it is not expected that demolition of several buildings would occur and reduce Dyess AFB's readiness capabilities. Therefore, the demolition of structures would not produce any cumulative impacts greater in scope or magnitude than those described for each individual environmental resource.

4.2 CONSTRUCTION PROJECTS

4.2.1 No Action Alternative

4.2.1.1 Climate and Meteorology

The No Action Alternative would not impact climate or meteorology.

4.2.1.2 Topography

The No Action Alternative would not impact topography.

4.2.1.3 Geology and Soils

The No Action Alternative would not impact geology or soils.

4.2.1.4 Public Health and Safety

The No Action Alternative would not have an impact on public safety. All base support and essential service facilities would continue to operate as they currently do.

4.2.1.5 Socioeconomics/Environmental Justice

There are no socioeconomic or Environmental Justice issues at Dyess AFB.

4.2.1.6 Noise

The No Action Alternative would not impact noise.

4.2.1.7 Air Quality

The No Action Alternative would not impact air quality.

4.2.1.8 Water Resources

The No Action Alternative would not have an impact on surface water or groundwater.

4.2.1.9 Biological Resources

Wetlands

The No Action Alternative would not impact any wetlands at Dyess AFB.

Vegetation

The No Action Alternative would not impact any vegetation at Dyess AFB.

Threatened and Endangered Species

The No Action Alternative would not impact any threatened or endangered species at Dyess AFB.

Terrestrial Wildlife

The No Action Alternative would not impact wildlife at Dyess AFB.

Aquatic Resources

The No Action Alternative would not impact aquatic species at Dyess AFB.

4.2.1.10 Cultural Resources

No cultural resources have been identified at Dyess AFB; therefore, the No Action Alternative would have no impact.

4.2.1.11 Hazardous and Toxic Materials and Wastes

The No Action Alternative would not impact any hazardous or toxic materials.

4.2.1.12 Environmental Restoration Program

The No Action Alternative would not impact the ERP.

4.2.1.13 Cumulative Impacts

The No Action Alternative would not produce any cumulative impacts greater in scope or magnitude than those described for each individual environmental resource.

4.2.2 Driveways and Parking Areas

4.2.2.1 Climate and Meteorology

Construction of a driveway or parking area would not impact climate or meteorology.

4.2.2.2 Topography

Dyess AFB is relatively flat with 0 to 3 percent slopes. If grading would be performed as part of this action, it would not result in a significant impact to topography.

4.2.2.3 Geology and Soils

Construction of parking areas and driveways would not impact geology. A temporary impact to local soils would be experienced during construction and site grading. All impacts would be localized and temporary. BMPs (e.g., watering down the work area) would be utilized during construction activities if dust and wind erosion were to become a problem. BMPs (e.g., hay bales, silt fences, etc.) would also be implemented to reduce the potential for soil erosion during storm events. There would not be any long-term impacts to soil.

4.2.2.4 Public Health and Safety

All work sites would be surrounded by orange mesh fence to limit access to authorized personnel. In addition, Dyess AFB is a restricted access facility and this action would not impact emergency services. Therefore, no adverse impacts on public health or safety would be expected with any construction activities.

4.2.2.5 Socioeconomics/Environmental Justice

There are no socioeconomic or Environmental Justice issues at Dyess AFB. A small, beneficial economic impact to the Abilene area may result due to the purchase of goods and services associated with this alternative.

4.2.2.6 Noise

There may be a temporary increase in noise levels in the immediate project area during construction activities. This impact would be limited to daytime work hours. Since Dyess AFB is an active military base with daily airfield operations (landings and takeoffs), a temporary,

localized increase in noise would not result in a significant adverse impact to the base community. Construction activities would not impact the Dyess AFB AICUZ guidelines.

4.2.2.7 Air Quality

Short-term, localized impacts to air quality may result from construction activities. Impacts would likely result from fossil fuel use, particulate emissions from soil disturbance, and use of materials containing VOCs. Fossil fuel emissions would produce carbon monoxide, nitrogen oxides, sulfur dioxide, and hazardous pollutants. BMPs would be utilized to reduce any particulate emissions. All impacts would be temporary and would not result in a significant environmental impact.

4.2.2.8 Water Resources

Construction of a parking area or driveway would not impact surface water hydrology or groundwater resources. There is the potential that surface water quality would be impacted from the operation and storage of heavy machinery or disturbance of soils. BMPs, including silt fences and hay bales, would be employed to minimize the downstream migration of pollutants. All potential impacts would be minor and would not extend past the construction period.

The Civil Engineering Squadron (CES) does not approve projects located in floodplains unless no other viable alternatives were available. Construction of parking areas would not be approved in a designed floodplain area, and would therefore not impact floodplain management at Dyess AFB.

4.2.2.9 Biological Resources

Wetlands

The construction of parking areas and driveways would only occur in the areas designated as residential and developed on Figure 3. No parking areas would be constructed in wetlands, as shown in Figure 7.

Vegetation

Construction of a parking area or driveway in the residential or developed areas, as designated on Figure 3, would result in a potential loss of landscaped or maintained vegetation. This vegetation loss would not be considered a significant impact when compared to the amount of vegetation in the area. There are no sensitive vegetation areas located on Dyess AFB.

Threatened and Endangered Species

No impact on threatened or endangered species. All activities would be conducted in accordance with the Texas horned lizard management procedures outlined in the INRMP (URS 2004a). If any individuals were encountered during construction, all activities would be halted and the Natural Resources Manager contacted. Construction would not resume without concurrence from the Natural Resources Manager.

Terrestrial Wildlife

These actions may temporarily impact wildlife in the project area during construction, such as displacement or mortality of individuals. The loss of a small number of individuals would not have a significant impact on the wildlife population and would not result in a long-term impact on the biological community. Long-term impacts related to habitat loss would result; however, this would not be a significant impact due to the amount of available habitat in the area.

Aquatic Resources

Construction of parking areas and driveways would not impact aquatic species at Dyess AFB.

4.2.2.10 Cultural Resources

No cultural resources have been identified at Dyess AFB; therefore, these projects would have no impact. However, if any archaeological resources were encountered during ground disturbing activities, all construction would be stopped and CEV would be contacted. No further excavation would be performed without clearance from the Cultural Resources Manager.

4.2.2.11 Hazardous and Toxic Materials and Wastes

If a spill of hazardous or toxic substances should occur during the construction period, the construction contractor would notify CEV immediately for direction on corrective measures and reporting requirements. Any spills resulting in hazardous or petroleum wastes would be disposed of according to federal, state, and local regulations.

4.2.2.12 Environmental Restoration Program

Closed ERP sites may be utilized if the closure allows for future compatible use. Coordination with CEV and Real Property (CERR) would be required to determine if the land would be suitable for the proposed action. If the proposed project were compatible with the closure requirements, the action would not produce an adverse impact to the ERP.

4.2.2.13 Cumulative Impacts

Construction of parking areas and driveways would occur only as mission requirements justify. All activities would occur in developed or residential areas of the base. Multiple actions occurring at Dyess AFB would not produce any cumulative impacts greater in scope or magnitude than those described for each individual environmental resource.

4.2.3 Minimum Use Access Roads and Recreational Trails

4.2.3.1 Climate and Meteorology

Construction of minimum use access roads or recreational trails would not impact climate or meteorology.

4.2.3.2 Topography

Dyess AFB is relatively flat with 0 to 3 percent slopes. Site grading may occur as a component of this action but would not result in a significant impact to topography.

4.2.3.3 Geology and Soils

Construction of minimum use access roads or recreational trails would not impact geology. A temporary impact to local soils would be experienced during construction and site grading. All impacts would be localized and temporary. BMPs (e.g., watering down the work area) would be utilized during construction activities if dust and wind erosion were to become a problem. BMPs (e.g., hay bales, silt fences, etc.) would also be implemented to reduce the potential for soil erosion during storm events. There would not be any long-term impacts to soil.

4.2.3.4 Public Health and Safety

All work sites would be surrounded by orange mesh fence to limit access to authorized personnel. In addition, Dyess AFB is a restricted access facility and this action would not impact emergency services. Therefore, no adverse impacts on public health or safety would be expected with any construction activities.

4.2.3.5 Socioeconomics/Environmental Justice

There are no socioeconomic or Environmental Justice issues at Dyess AFB. Therefore, this action would not result in an economic or social impact to any populations at Dyess AFB.

4.2.3.6 Noise

There may be a temporary increase in noise levels in the immediate project area during construction activities. This impact would be limited to daytime work hours. Since Dyess AFB is an active military base with daily airfield operations (landings and takeoffs), a temporary, localized increase in noise would not result in a significant adverse impact to the base community. Construction activities would not impact the Dyess AFB AICUZ guidelines.

4.2.3.7 Air Quality

Short-term, localized impacts to air quality may result from construction activities. Impacts would likely result from fossil fuel use and particulate emissions from soil disturbance. Fossil fuel emissions would produce carbon monoxide, nitrogen oxides, sulfur dioxide, and hazardous pollutants. BMPs would be utilized to reduce any particulate emissions. All impacts would be temporary and would not result in a significant environmental impact.

4.2.3.8 Water Resources

Construction of minimum use access roads or recreational trails would not impact surface water hydrology or groundwater resources. There is the potential that surface water quality would be impacted from the operation and storage of heavy machinery or disturbance of soils. BMPs,

including silt fences and hay bales, would be employed to minimize the downstream migration of pollutants. All potential impacts would be minor and would not extend past the construction period.

The CES does not approve projects located in floodplains unless no other viable alternatives were available. Construction of minimum use access roads or recreational trails would not be approved in a designed floodplain area, and would therefore not impact floodplain management at Dyess AFB.

4.2.3.9 Biological Resources

Wetlands

The construction of minimum use access roads or recreational trails would not be constructed in wetlands, as shown in Figure 7. Fill material and debris that may be accumulated as a result of this alternative would not be placed in wetlands.

Vegetation

Construction of minimum use access roads or recreational trails would result in a loss of vegetation in the footprint of the road and/or trail. The amount of vegetation lost with this alternative would be less than two acres and would not result in a significant impact when compared to the amount of vegetation in the area. Additional disturbance to vegetation may occur during construction activities. This impact would be localized and temporary and would not result in long-term impacts to vegetation at Dyess AFB. There are no sensitive vegetation areas located on Dyess AFB.

Threatened and Endangered Species

All activities would be conducted in accordance with the Texas horned lizard management procedures outlined in the INRMP (URS 2004a). Prior to initiation of construction activities in undisturbed areas of Dyess AFB, the Natural Resources Manager would review the project area for potential Texas horned lizard habitat. Field surveys would be completed prior to construction if deemed necessary by the Natural Resources Manager. If any individuals were encountered, the Natural Resources Manager would determine if relocating the individuals is feasible. Construction would not occur without approval from the Natural Resources Manager.

Terrestrial Wildlife

These actions may temporarily impact wildlife in the project area during construction, such as displacement or mortality of individuals. The loss of a small number of individuals would not have a significant impact on the wildlife population and would not result in a long-term impact on the biological community. Long-term impacts related to habitat loss would result; however, this would not be a significant impact due to the amount of available habitat in the area.

Aquatic Resources

Construction of minimum use access roads and recreational trails would not impact aquatic species at Dyess AFB.

4.2.3.10 Cultural Resources

No cultural resources have been identified at Dyess AFB; therefore, these projects would have no impact. However, if any archaeological resources were encountered during ground disturbing activities, all construction would be stopped and CEV would be contacted. No further excavation would be performed without clearance from the Cultural Resources Manager.

4.2.3.11 Hazardous and Toxic Materials and Wastes

If a spill of hazardous or toxic substances should occur during the construction period, the construction contractor would notify CEV immediately for direction on corrective measures and reporting requirements. Any spills resulting in hazardous or petroleum wastes would be disposed of according to federal, state, and local regulations.

4.2.3.12 Environmental Restoration Program

Closed ERP sites may be utilized if the closure allows for future compatible use. Coordination with CEV and CERR would be required to determine if the land would be suitable for the proposed action. If the proposed project were compatible with the closure requirements, the action would not produce an adverse impact to the ERP.

4.2.3.13 Cumulative Impacts

Construction of minimum use access roads or recreational trails would occur in undeveloped portions of Dyess AFB. The construction of recreational trails or minimum use access roads would not facilitate additional development in the undeveloped areas. Therefore, these actions would not produce any cumulative impacts greater in scope or magnitude than those described for each individual environmental resource.

4.2.4 Temporary Aircraft Transfer Path

4.2.4.1 Climate and Meteorology

Construction of a temporary aircraft transfer path would not impact climate or meteorology.

4.2.4.2 Topography

Topography would not be impacted by this alternative.

4.2.4.3 Geology and Soils

Construction of a temporary aircraft transfer path would not impact geology. A temporary impact to local soils may be experienced during vegetation removal. All impacts would be localized and temporary and would not result in long-term impacts to soil.

4.2.4.4 Public Health and Safety

Personnel would be restricted from the work site during operation of heavy machinery. In addition, Dyess AFB is a restricted access facility and this action would not impact emergency services. Therefore, no adverse impacts on public health or safety would be expected with any construction activities.

4.2.4.5 Socioeconomics/Environmental Justice

There are no socioeconomic or Environmental Justice issues at Dyess AFB. In addition, this action would not result in an economic or social impact to any members of the Dyess AFB community.

4.2.4.6 Noise

There may be a temporary increase in noise levels in the immediate project area related to vegetation removal and equipment operation. This impact would be limited to daytime work hours. Since Dyess AFB is an active military base with daily airfield operations (landings and takeoffs), a temporary, localized increase in noise would not result in a significant adverse impact to the base community. The increase in noise that would result from these activities would not impact the Dyess AFB AICUZ guidelines.

4.2.4.7 Air Quality

Short-term, localized impacts to air quality may result from fossil fuel use and particulate emissions from the operation of vehicles and equipment. Fossil fuel emissions would produce carbon monoxide, nitrogen oxides, sulfur dioxide, and hazardous pollutants. All impacts would be temporary and would not result in a significant environmental impact.

4.2.4.8 Water Resources

Vegetation removal to create a temporary aircraft transfer path would not impact surface water hydrology or groundwater resources. There is the potential that surface water quality would be impacted from the operation and storage of heavy machinery or disturbance of soils. BMPs, including silt fences and hay bales, would be employed to minimize the downstream migration of pollutants. All potential impacts would be minor and would not extend past the construction period.

The temporary aircraft transfer path would not be located in a floodplain.

4.2.4.9 Biological Resources

Wetlands

A wetland is located adjacent to the proposed route of the temporary aircraft transfer path, but this wetland would be avoided with this action.

Vegetation

This action would involve the removal of vegetation along the route for the temporary aircraft transfer path. Woody vegetation (e.g., mesquite) located along this corridor would be mechanically cleared or grubbed. Mesquite is an invasive species at Dyess AFB, and its removal would be consistent with the invasive species management program at Dyess AFB. Following the use of the temporary aircraft transfer path, vegetation would be allowed to re-establish in the area consistent with the INRMP (URS 2004a). No long-term impacts to vegetation would occur with this action.

Threatened and Endangered Species

All activities would be conducted in accordance with the Texas horned lizard management procedures outlined in the INRMP (URS 2004a). Prior to initiation of construction activities in undisturbed areas of Dyess AFB, the Natural Resources Manager would review the project area for potential Texas horned lizard habitat. Field surveys would be completed prior to construction if deemed necessary by the Natural Resources Manager. If any individuals were encountered, the Natural Resources Manager would determine if relocating the individuals is feasible. Construction of the temporary aircraft transfer path would not occur without approval from the Natural Resources Manager.

Terrestrial Wildlife

This action may temporarily impact wildlife in the project area during vegetation removal, such as displacement or mortality of individuals. The loss of a small number of individuals would not have a significant impact on the wildlife population and would not result in a long-term impact on the biological community. Long-term impacts related to habitat loss would not occur with this alternative.

Aquatic Resources

This alternative would not impact aquatic species at Dyess AFB.

4.2.4.10 Cultural Resources

No cultural resources have been identified at Dyess AFB; therefore, these projects would have no impact. However, if any archaeological resources were encountered during ground disturbing activities (i.e., grubbing), all construction would be stopped and CEV would be contacted. No further excavation would be performed without clearance from the Cultural Resources Manager.

4.2.4.11 Hazardous and Toxic Materials and Wastes

If a spill of hazardous or toxic substances should occur during the construction period, the construction contractor would notify CEV immediately for direction on corrective measures and reporting requirements. Any spills resulting in hazardous or petroleum wastes would be disposed of according to federal, state, and local regulations.

4.2.4.12 Environmental Restoration Program

The proposed route would be located along the Explosive Ordnance Disposal (EOD) Area, ERP Site OT-31. This is an active ERP site used to detonate and bury old emissions. The temporary aircraft transfer path would not encroach on the EOD Area, and would therefore not impact the ERP Program. Coordination with CEV and the EOD flight would be required to ensure unexploded ordnance (UXO) would not be disturbed with this action.

4.2.4.13 Cumulative Impacts

The combination of constructing a temporary aircraft transfer path with other actions occurring at Dyess AFB would not result in any cumulative impacts greater in scope or magnitude than those described for each individual environmental resource. This action would primarily result in temporary impacts that would not be additive, synergistic, or reductional with impacts that may result from unrelated actions.

4.2.5 Residential Structures

4.2.5.1 Climate and Meteorology

Construction of residential buildings would not impact climate or meteorology.

4.2.5.2 Topography

Construction of residential buildings would not impact topography of the immediate area.

4.2.5.3 Geology and Soils

Construction of residential structures would not impact geology. A temporary impact to local soils would be experienced during construction and site grading. Fill material would likely be required to ensure the proper building stabilization. All fill soils would be obtained from an approved local source. All impacts would be localized and temporary. BMPs (e.g., watering down the work area) would be utilized during construction activities if dust and wind erosion were to become a problem. BMPs (e.g., hay bales, silt fences, etc.) would also be utilized if soil erosion from storm events were to occur.

Potential long-term impacts to soils would result in the immediate footprint of the building. This would not be considered a significant impact.

4.2.5.4 Public Health and Safety

All work sites would be surrounded by orange mesh fence to limit access to authorized personnel. In addition, Dyess AFB is a restricted access facility and this action would not impact emergency services. Therefore, no adverse impacts on public health or safety would be expected with any construction activities.

4.2.5.5 Socioeconomics/Environmental Justice

There are no socioeconomic or Environmental Justice issues at Dyess AFB. A small, beneficial economic impact to the Abilene area may result due to the purchase of goods and services associated with this alternative.

4.2.5.6 Noise

There may be a temporary increase in noise levels in the immediate project area during construction activities. This impact would be limited to daytime work hours. Since Dyess AFB is an active military base with daily airfield operations (landings and takeoffs), a temporary, localized increase in noise would not result in a significant adverse impact to the base community. Construction activities would not impact the Dyess AFB AICUZ guidelines.

4.2.5.7 Air Quality

Short-term, localized impacts to air quality may result from construction activities. Impacts would likely result from fossil fuel use, particulate emissions from soil disturbance, and use of materials containing VOCs. Fossil fuel emissions would produce carbon monoxide, nitrogen oxides, sulfur dioxide, and hazardous pollutants. BMPs would be utilized to reduce any particulate emissions. All impacts would be temporary and would not result in a significant environmental impact.

4.2.5.8 Water Resources

Construction of residential structures would not impact surface water hydrology or groundwater resources. There is the potential that surface water quality would be impacted from the operation and storage of heavy machinery or disturbance of soils. BMPs, including silt fences and hay bales, would be employed to minimize the downstream migration of pollutants. All potential impacts would be minor and would not extend past the construction period.

New construction would not occur in the floodplain, therefore, this alternative would not impact floodplain management.

4.2.5.9 Biological Resources

Wetlands

The construction of residential structures would only occur in the areas designated as residential on Figure 3. There are two wetlands located along the northwest perimeter of the south MFH

area (Figure 7). Construction of residential structures would be restricted from this area, and no fill or debris would be placed in any wetland areas. No other wetlands are located in the residential area, as shown on Figure 3. No impacts would result from construction of residential structures in the MFH area.

Vegetation

Construction of residential structures would result in a temporary loss of vegetation during construction. Upon completion of the building construction, the area would be landscaped and maintained as a manicured lawn. Permanent vegetation loss would be experienced in the immediate footprint of the structure; however, this would not be a significant impact in relation to the total vegetated area on base.

Threatened and Endangered Species

No impact on threatened or endangered species. All activities would be conducted in accordance with the Texas horned lizard management procedures outlined in the INRMP (URS 2004a). If any individuals were encountered during construction, all activities would be halted and the Natural Resources Manager contacted. Construction activities would not resume without concurrence from the Natural Resources Manager.

Terrestrial Wildlife

These actions may temporarily impact wildlife in the project area during construction, such as displacement or mortality of individuals. The loss of a small number of individuals would not have a significant impact on the wildlife population and would not result in a long-term impact on the biological community. Long-term impacts related to habitat loss would result; however, this would not be a significant impact due to the amount of available habitat in the area.

Aquatic Resources

Construction of residential structures would not impact aquatic species at Dyess AFB. No construction activities would be performed in any streams, ponds, or creeks.

4.2.5.10 Cultural Resources

No cultural resources have been identified at Dyess AFB; therefore, these projects would have no impact. However, if any archaeological resources were encountered during ground disturbing activities, all construction would be stopped and CEV would be contacted. No further excavation would be performed without clearance from the Cultural Resources Manager.

4.2.5.11 Hazardous and Toxic Materials and Wastes

If a spill of hazardous or toxic substances should occur during the construction period, the construction contractor would notify CEV immediately for direction on corrective measures and reporting requirements. Any hazardous or petroleum wastes resulting from this alternative would be disposed of according to federal, state, and local regulations.

4.2.5.12 Environmental Restoration Program

ERP Site SS-42, Background Boring Number 2, is located in the MFH area as shown in Figure 8. This site was investigated as part of the Resource Conservation and Recovery Act (RCRA) permit as a background boring. The findings of this investigation included elevated levels of refrigerants, thought to be the result of incidental spillage from temporary storage of air conditioning units during MFH remodeling. No further action was recommended in the investigation, and the site was not designated as a Solid Waste Management Unit (SWMU). The site was closed in 1996 with the deed recording stipulating future industrial use only, according to the Dyess AFB Management Action Plan (Dyess AFB 2003). The site is currently a vacant lot and construction of residential structures would not be compatible with the property deed. Therefore, no housing would be constructed on this site, and no impact on the ERP would occur. There are no other ERP sites located in the residential area.

4.2.5.13 Cumulative Impacts

All construction of residential structures would occur in the area adjacent to the MFH area. Since construction would be limited to the area surrounding the existing MFH area (residential, Figure 3), no cumulative impacts greater in scope or magnitude than those described for each individual environmental resource would occur with this alternative.

4.2.6 Recreational and Base Support Facilities

4.2.6.1 Climate and Meteorology

Construction of recreational and support facilities would not impact climate or meteorology.

4.2.6.2 Topography

Construction of recreational and support facilities would not impact topography of the immediate area.

4.2.6.3 Geology and Soils

Construction of recreational and support facilities would not impact geology. A temporary impact to local soils would be experienced during construction and site grading. Fill material would likely be required to ensure the proper building stabilization. All fill would be obtained from an approved local source. BMPs (e.g., watering down the work area) would be utilized during construction activities if dust and wind erosion were to become a problem. BMPs (e.g., silt fences, hay bales, etc.) would also be utilized to minimize potential soil erosion during storm events. Potential long-term impacts would result in the immediate footprint of the building. This would not be considered a significant impact.

4.2.6.4 Public Health and Safety

All work sites would be surrounded by orange mesh fence to limit access to authorized personnel. In addition, Dyess AFB is a restricted access facility and this action would not impact

emergency services. Therefore, no adverse impacts on public health or safety would be expected with any construction activities.

4.2.6.5 Socioeconomics/Environmental Justice

There are no socioeconomic or Environmental Justice issues at Dyess AFB. A small, beneficial economic impact to the Abilene area may result due to the purchase of goods and services associated with this alternative.

4.2.6.6 Noise

There may be a temporary increase in noise levels in the immediate project area during construction activities. This impact would be limited to daytime work hours. Since Dyess AFB is an active military base with daily airfield operations (landings and takeoffs), a temporary, localized increase in noise would not result in a significant adverse impact to the base community. Construction activities would not impact the Dyess AFB AICUZ guidelines.

4.2.6.7 Air Quality

Short-term, localized impacts to air quality may result from construction activities. Impacts would likely result from fossil fuel use, particulate emissions from soil disturbance, and use of materials containing VOCs. Fossil fuel emissions would produce carbon monoxide, nitrogen oxides, sulfur dioxide, and hazardous pollutants. BMPs would be utilized to reduce any particulate emissions. All construction-related impacts would be temporary and would not result in a significant environmental impact.

4.2.6.8 Water Resources

Construction of recreational and support facilities would not impact surface water hydrology or groundwater resources. There is the potential that surface water quality would be impacted from the operation and storage of heavy machinery or disturbance of soils. BMPs, including silt fences and hay bales, would be employed to minimize downstream migration of pollutants. All potential impacts would be minor and would not extend past the construction period.

CES does not approve projects located in floodplains unless no other viable alternatives were available. Construction of recreational and support facilities would not be approved in a designed floodplain area, and would therefore not impact floodplain management at Dyess AFB.

4.2.6.9 Biological Resources

Wetlands

The construction of recreational and support facilities would only occur in the areas designated as residential and developed on Figure 3. There are wetlands located along the northwest perimeter of the south MFH area (Figure 7). No construction activities would be completed in this area, and no fill or debris would be placed in any wetland areas. No other wetlands are

located in the potential project area, as shown on Figure 7. No impacts would result from this alternative.

Vegetation

Construction of recreational and support facilities would result in a temporary loss of vegetation during construction. Upon completion of construction activities, the area would be landscaped and revegetated according to the INRMP (URS 2004a). Permanent vegetation loss would be experienced in the immediate footprint of any structures; however, this would not be a significant impact in relation to the total vegetated area on base.

Threatened and Endangered Species

No impact on threatened or endangered species. All activities would be conducted in accordance with the Texas horned lizard management procedures outlined in the INRMP (URS 2004a). If any individuals were encountered during construction, all activities would be halted and the Natural Resources Manager contacted. Construction activities would not resume without concurrence from the Natural Resources Manager.

Terrestrial Wildlife

These actions may temporarily impact wildlife in the project area during construction, such as displacement or mortality of individuals. The loss of a small number of individuals would not have a significant impact on the wildlife population and would not result in a long-term impact on the biological community. Long-term impacts related to habitat loss would result; however, this would not be a significant impact due to the amount of available habitat in the area.

Aquatic Resources

Construction of recreational and support facilities would not impact aquatic species at Dyess AFB. No construction activities would be performed in any streams, ponds, or creeks.

4.2.6.10 Cultural Resources

No cultural resources have been identified at Dyess AFB; therefore, these projects would have no impact. However, if any archaeological resources were encountered during ground disturbing activities, all construction would be stopped and CEV would be contacted. No further excavation would be performed without clearance from the Cultural Resources Manager.

4.2.6.11 Hazardous and Toxic Materials and Wastes

If a spill of hazardous or toxic substances should occur during the construction period, the construction contractor would notify CEV immediately for direction on corrective measures and reporting requirements. Any hazardous or petroleum wastes resulting from this alternative would be disposed of according to federal, state, and local regulations.

Certain facilities may, upon completion, utilize hazardous materials and generate hazardous waste during regular operations. These operations would be subject to all rules and requirements outlined in the Dyess IWMP (URS 2004b).

4.2.6.12 Environmental Restoration Program

No building construction would occur on active ERP sites. Closed ERP sites may be utilized if the closure allows for future compatible usage. Coordination with CEV and CERR would be required to determine if the land would be suitable for proposed facility. If the proposed facility were compatible with the closure requirements, the construction of the facility would not produce an adverse impact to the ERP.

4.2.6.13 Cumulative Impacts

All construction of recreational and support facilities would occur in previously developed areas. All support and recreational facilities would be compatible with existing land use strategies; therefore, constructing several of these types of facilities would provide a beneficial cumulative impact to the overall Dyess AFB community. No adverse cumulative impacts greater in scope or magnitude than individual impacts would occur since all construction would be in the developed or residential areas of the base.

4.2.7 Mission Support Facilities

4.2.7.1 Climate and Meteorology

Construction of mission support facilities would not impact climate or meteorology.

4.2.7.2 Topography

Construction of mission support facilities would not impact topography of the immediate area.

4.2.7.3 Geology and Soils

Construction of mission support facilities would not impact geology. A temporary impact to local soils would be experienced during construction and site grading. Fill material would likely be required to ensure the proper building stabilization. All fill soils would be obtained from an approved local source. BMPs (e.g., watering down the work area) would be utilized during construction activities if dust and wind erosion were to become a problem. BMPs (e.g., hay bales, silt fences, etc.) would also be utilized to minimize soil erosion during storm events.

Potential long-term impacts to soils would result in the immediate footprint of the building. This would not be considered a significant impact.

4.2.7.4 Public Health and Safety

All work sites would be surrounded by orange mesh fence to limit access to authorized personnel. In addition, Dyess AFB is a restricted access facility. Therefore, no adverse impacts on public health or safety would be expected with any construction activities.

Mission support facilities include public safety and emergency response facilities (e.g., fire station, military police, etc.). Project activities that enhance the services provided by these groups would have a beneficial impact on public safety at Dyess AFB.

4.2.7.5 Socioeconomics/Environmental Justice

There are no socioeconomic or Environmental Justice issues at Dyess AFB. A small, beneficial economic impact to the Abilene area may result due to the purchase of goods and services associated with this alternative.

4.2.7.6 Noise

There may be a temporary increase in noise levels in the immediate project area during construction activities. This impact would be limited to daytime work hours. Since Dyess AFB is an active military base with daily airfield operations (landings and takeoffs), a temporary, localized increase in noise would not result in a significant adverse impact to the base community. Construction activities would not impact the Dyess AFB AICUZ guidelines.

4.2.7.7 Air Quality

Short-term, localized impacts to air quality may result from construction activities. Impacts would likely result from fossil fuel use, particulate emissions from soil disturbance, and use of materials containing VOCs. Fossil fuel emissions would produce carbon monoxide, nitrogen oxides, sulfur dioxide, and hazardous pollutants. BMPs would be utilized to reduce any particulate emissions. All construction-related impacts would be temporary and would not result in a significant environmental impact.

Several operational activities at Dyess AFB produce VOC, particulate, and other chemical emissions. Dyess AFB currently operates under a Permit by Rule designation with the TCEQ. Operations resulting from this alternative that produce VOCs or other emissions regulated by the TCEQ would comply with the current Permit by Rule requirements. Therefore, no significant adverse impacts would result from any potential operations that may result from this alternative.

4.2.7.8 Water Resources

Construction of mission support facilities would not impact surface water hydrology or groundwater resources. There is the potential that surface water quality would be impacted from the operation and storage of heavy machinery or disturbance of soils during construction. BMPs, including silt fences and hay bales, would be employed to minimize the downstream migration of pollutants. All construction impacts would be minor and would not extend past the construction period.

Several operational activities utilize outside storage or fuels, materials, and equipment that may impact surface water quality. All shop facilities are subject to the requirements and BMPs outlined in the SWPPP (Dyess AFB 2002). BMPs identified in the SWPPP are designed to minimize and mitigate potential surface water contamination. With these procedures in place, no significant adverse impacts would be expected with these project types.

CES does not approve projects located in floodplains unless no other viable alternatives were available. Construction would not be approved in a designated floodplain area, and would therefore not impact floodplain management at Dyess AFB.

4.2.7.9 Biological Resources

Wetlands

The construction of mission support facilities would only occur in the areas designated as developed on Figure 3. There are no wetlands located in this area and no fill or debris would be placed in any wetland areas.

Vegetation

Construction of mission support facilities would result in a temporary loss of vegetation during construction. Upon completion of construction activities, the area would be landscaped and revegetated according to the INRMP (URS 2004a). Permanent vegetation loss would be experienced in the immediate footprint of any structures; however, this would not be a significant impact in relation to the total vegetated area on base.

Threatened and Endangered Species

No impact on threatened or endangered species. All activities would be conducted in accordance with the Texas horned lizard management procedures outlined in the INRMP (URS 2004a). If any individuals were encountered during construction, all activities would be halted and the Natural Resources Manager contacted. Construction activities would not resume without concurrence from the Natural Resources Manager.

Terrestrial Wildlife

These actions may temporarily impact wildlife in the project area during construction, such as displacement or mortality of individuals. The loss of a small number of individuals would not have a significant impact on the wildlife population and would not result in a long-term impact on the biological community. Long-term impacts related to habitat loss would result; however, this would not be a significant impact due to the amount of available habitat in the area.

Aquatic Resources

Construction of mission support facilities would not impact aquatic species at Dyess AFB. No construction activities would be performed in any streams, ponds, or creeks.

4.2.7.10 Cultural Resources

No cultural resources have been identified at Dyess AFB; therefore, these projects would have no impact. However, if any archaeological resources were encountered during ground disturbing activities, all construction would be stopped and CEV would be contacted. No further excavation would be performed without clearance from the Cultural Resources Manager.

4.2.7.11 Hazardous and Toxic Materials and Wastes

If a spill of hazardous or toxic substances should occur during the construction period, the construction contractor would notify CEV immediately for direction on corrective measures and reporting requirements. Any hazardous or petroleum wastes resulting from this alternative would be disposed of according to federal, state, and local regulations. Certain facilities may, upon completion, utilize hazardous materials and generate hazardous waste during regular operations. These operations would be subject to all rules and requirements outlined in the Dyess IWMP (URS 2004b) and would not result in a significant adverse impact.

4.2.7.12 Environmental Restoration Program

No building construction would occur on active ERP sites. Closed ERP sites may be utilized if the closure allows for future industrial usage. Coordination with CEV and CERR would be required to determine if the land would be suitable for proposed facility. If the proposed building and operations were compatible with the closure requirements, the construction of the mission support facility would not produce an adverse impact to the ERP.

4.2.7.13 Cumulative Impacts

All construction of mission support facilities would occur in previously developed areas. All facilities would be compatible with existing land use strategies; therefore, constructing several of these types of facilities would not result in adverse cumulative impacts greater in scope or magnitude than individual impacts.

4.2.8 Modify Existing Buildings

4.2.8.1 Climate and Meteorology

Modifying existing buildings to support new operations would not impact climate or meteorology.

4.2.8.2 Topography

Modifying existing buildings to support new operations would not impact topography of the immediate area.

4.2.8.3 Geology and Soils

Modifying existing buildings to support new operations would not impact geology. A temporary impact to local soils may be experienced during construction if any exterior modification is required. All impacts would be localized and temporary. BMPs (e.g., watering down the work area) would be utilized during construction activities if dust and wind erosion were to become a problem.

4.2.8.4 Public Health and Safety

All work sites would be surrounded by orange mesh fence to limit access to authorized personnel. In addition, Dyess AFB is a restricted access facility and this action would not impact emergency services. Therefore, no adverse impacts on public health or safety would be expected with any construction activities.

4.2.8.5 Socioeconomics/Environmental Justice

There are no socioeconomic or Environmental Justice issues at Dyess AFB. A small, beneficial economic impact to the Abilene area may result due to the purchase of goods and services associated with this alternative.

4.2.8.6 Noise

There may be a temporary increase in noise levels in the immediate project area during construction activities. This impact would be limited to daytime work hours. Since Dyess AFB is an active military base with daily airfield operations (landings and takeoffs), a temporary, localized increase in noise would not result in a significant adverse impact to the base community. Construction activities would not impact the Dyess AFB AICUZ guidelines.

4.2.8.7 Air Quality

Short-term, localized impacts to air quality may result from construction activities. Impacts would likely result from fossil fuel use, particulate emissions from soil disturbance, and use of materials containing VOCs. Fossil fuel emissions would produce carbon monoxide, nitrogen oxides, sulfur dioxide, and hazardous pollutants. BMPs would be utilized to reduce any particulate emissions. All construction-related impacts would be temporary and would not result in a significant environmental impact.

Several operational activities at Dyess AFB produce VOC, particulate, and other chemical emissions. Dyess currently operates under a Permit by Rule designation with the TCEQ. This alternative could potentially alter or expand existing operations. All operations that produce emissions regulated by the TCEQ located the modified buildings would comply with the current Permit by Rule requirements outlined in the Integrated Air Quality Plan (IAQP) (URS 2005b). Therefore, no significant adverse impacts would result from any potential operations that may result from this alternative.

4.2.8.8 Water Resources

Modifying existing buildings to support new operations would not impact surface water hydrology or groundwater resources. There is the potential that surface water quality would be impacted from the operation and storage of heavy machinery or disturbance of soils during construction and renovation. BMPs, including silt fences and hay bales, would be employed to minimize downstream migration of pollutants. All construction impacts would be minor and would not extend past the construction period.

Several operational activities utilize outside storage for fuels, materials, and equipment that may impact surface water quality. All additional shop facilities that may result from this alternative are subject to the requirements and BMPs outlined in the SWPPP (Dyess AFB 2002). BMPs identified in the SWPPP are designed to minimize and mitigate potential surface water contamination. With these procedures in place, no significant adverse impacts would be expected with these project types.

This alternative would not involve new construction of structures. If an existing structure was located in a floodplain, modification of that structure would be limited so no additional impacts to the floodplain would occur.

4.2.8.9 Biological Resources

Wetlands

Modifying existing buildings to support new operations would not impact any wetlands. In addition, no construction fill or debris would be placed in any wetland areas.

Vegetation

Modifying existing buildings to support new operations would not impact vegetation. The developed portion of Dyess AFB is either paved or landscaped. If any exterior modification or construction of additional structures would occur, temporary impacts on vegetation may be experienced. Upon completion of construction activities, all disturbed areas would be landscaped and revegetated according to the INRMP (URS 2004a). Permanent vegetation loss would be experienced in the immediate footprint of any new structures; however, this would not be a significant impact in relation to the total vegetated area on base.

Threatened and Endangered Species

No impact on threatened or endangered species. All activities would be conducted in accordance with the Texas horned lizard management procedures outlined in the INRMP (URS 2004a). If any individuals were encountered during construction, all activities would be halted and the Natural Resources Manager contacted. Construction activities would not resume without concurrence from the Natural Resources Manager.

Terrestrial Wildlife

These actions may temporarily impact wildlife in the project area during construction, such as displacement or mortality of individuals. The loss of a small number of individuals would not have a significant impact on the wildlife population and would not result in a long-term impact on the biological community. Long-term impacts related to habitat loss would result; however, this would not be a significant impact due to the amount of available habitat in the area.

Aquatic Resources

Modifying existing buildings to support new operations would not impact aquatic species at Dyess AFB. No construction activities would be performed in any streams, ponds, or creeks.

4.2.8.10 Cultural Resources

No cultural resources have been identified at Dyess AFB; therefore, these projects would have no impact. However, if any archaeological resources were encountered during ground disturbing activities, all construction would be stopped and CEV would be contacted. No further excavation would be performed without clearance from the Cultural Resources Manager.

4.2.8.11 Hazardous and Toxic Materials and Wastes

If a spill of hazardous or toxic substances should occur during the construction period, the construction contractor would notify CEV immediately for direction on corrective measures and reporting requirements. Any hazardous or petroleum wastes resulting from this alternative would be disposed of according to federal, state, and local regulations. Certain facilities may, upon completion, utilize hazardous materials and generate hazardous waste during regular operations. These operations would be subject to all rules and requirements outlined in the Dyess IWMP (URS 2004b) and would not result in a significant adverse impact.

4.2.8.12 Environmental Restoration Program

Closed ERP sites may be utilized if the closure allows for future compatible use. Several buildings at Dyess AFB are currently located on or near an active or closed ERP site. If building modification or additions were to occur at one of these locations, coordination with CEV and CERR would be required to determine if the land would be compatible. If the proposed building and operations were compatible with the closure requirements, the modification of existing buildings to support new operations would not produce an adverse impact to the ERP.

4.2.8.13 Cumulative Impacts

Modifying existing buildings to support new operations would occur in previously developed areas. All facilities would be compatible with existing land use strategies; therefore, these actions would not result in adverse cumulative impacts greater in scope or magnitude than individual impacts.

4.2.9 Utility Extensions

4.2.9.1 Climate and Meteorology

Construction of utility extensions would not impact climate or meteorology.

4.2.9.2 Topography

The installation of aboveground and underground utility extensions would impact topography.

4.2.9.3 Geology and Soils

Construction of utility extensions would not impact geology. A temporary impact to local soils would be experienced during excavation. BMPs (e.g., watering down the work area) would be utilized during excavation activities if dust and wind erosion were to become a problem.

4.2.9.4 Public Health and Safety

Dyess AFB is a restricted access facility and work sites would be surrounded by orange mesh fence to limit access to authorized personnel. The installation of utility systems would not impact emergency services. Therefore, no adverse impacts on public health or safety would be expected with any construction-related activities.

4.2.9.5 Socioeconomics/Environmental Justice

There are no socioeconomic or Environmental Justice issues at Dyess AFB. Extending utilities at Dyess AFB would not have a social or economic impact.

4.2.9.6 Noise

There may be a temporary increase in noise levels in the immediate project area during construction activities. This impact would be limited to daytime work hours. Since Dyess AFB is an active military base with daily airfield operations (landings and takeoffs), a temporary, localized increase in noise would not result in a significant adverse impact to the base community. Construction activities would not impact the Dyess AFB AICUZ guidelines.

4.2.9.7 Air Quality

Short-term, localized impacts to air quality may result from construction activities. Impacts would likely result from fossil fuel use and particulate emissions from soil disturbance. Fossil fuel emissions would produce carbon monoxide, nitrogen oxides, sulfur dioxide, and hazardous pollutants. BMPs would be utilized to reduce any particulate emissions. All impacts would be temporary and would not result in a significant environmental impact.

4.2.9.8 Water Resources

The extension of underground or aboveground utilities would not have a significant impact on surface water or groundwater resources. The potential for migration of contaminants (i.e., sediment) to nearby surface water resources during precipitation events would be minimized by the use of BMPs (e.g., silt fences, hay bales, etc.).

4.2.9.9 Biological Resources

Wetlands

Wetlands would be avoided with this alternative to the extent feasible. However, if the proposed utility location was designed to cross a wetland, horizontal boring techniques would be utilized to route the utility under the wetland and minimize any potential impacts that may occur. Any action that would occur in a wetland designated on Figure 7 would need to comply with EO 11990 and AFI 32-7064. If potential adverse impacts would be expected, appropriate mitigation would be coordinated with the Dyess AFB Natural Resources Manager and the USACE. These projects would require a Finding of No Practicable Alternative (FONPA), per AFI 32-7061, and would not be covered with this PEA.

Vegetation

Potential short-term impacts to vegetation would occur during construction from the operation of machinery and excavating or trenching in the footprint of the proposed utility. Following construction activities, the area would be stabilized and revegetated according to the INRMP (URS 2004a). Therefore, no significant long-term impacts would occur with this alternative.

Threatened and Endangered Species

All activities would be conducted in accordance with the Texas horned lizard management procedures outlined in the INRMP (URS 2004a). Prior to initiation of construction activities in undisturbed areas of Dyess AFB, the Natural Resources Manager would review the project area for potential Texas horned lizard habitat. Field surveys would be completed prior to construction if deemed necessary by the Natural Resources Manager. If any individuals were encountered, the Natural Resources Manager would determine if relocating the individuals is feasible. The installation or utilities would not occur without approval from the Natural Resources Manager.

Terrestrial Wildlife

These actions may temporarily impact wildlife in the project area during construction, such as displacement or mortality of individuals. Impacts to individuals would not result in significant impacts to the population or to the biological community.

Aquatic Resources

Aquatic species do not reside in Little Elm Creek or any other drainages on base. Therefore, no direct impacts to aquatic species would result from these project types. However, Little Elm

Creek drains to Big Elm Creek and Lake Fort Phantom Hill. This lake provides recreational fishing for the area. Any impacts that would result in impacts to water quality may impact aquatic resources in the lake. BMPs would be utilized to minimize the potential of downstream migration of pollutants that may impact downstream resources.

4.2.9.10 Cultural Resources

Dyess AFB does not have any significant cultural resources. However, if archaeological resources are encountered during any ground disturbing activity, construction will be halted and the Cultural Resources Manager shall be notified. Construction will not resume without the approval of the Cultural Resources Manager.

4.2.9.11 Hazardous and Toxic Materials and Wastes

Extending utility services would not be expected to impact hazardous or toxic materials. If any hazardous materials were encountered, or if the construction activity resulted in a spill or leak of hazardous or petroleum products, coordination with CEV would be required to ensure the proper disposal and mitigation of the material.

4.2.9.12 Environmental Restoration Program

No activities would be performed on an active ERP site. If the location of the utility line were to cross a closed ERP site, the project would be reviewed by CEV and CERR to ensure any activities would be compliant with the closure certification.

4.2.9.13 Cumulative Impacts

Construction of multiple actions that result in an enhanced communication system or more reliable services may result in a synergistic cumulative impact. The combined effect of multiple actions would provide a beneficial impact on the overall electrical, communication, and utility systems at Dyess AFB. Combining utility extension projects with other actions occurring at Dyess AFB would not result in cumulative environmental impacts that would be greater in scope or magnitude than the individual impacts evaluated in this document.

4.3 STORMWATER MANAGEMENT

4.3.1 No Action Alternative

4.3.1.1 Climate and Meteorology

The No Action Alternative would not impact climate or meteorology.

4.3.1.2 Topography

The No Action Alternative would not impact topography.

4.3.1.3 Geology and Soils

The No Action Alternative would not impact geology or soils. Certain areas currently experiencing soil erosion during storm events would continue to erode. If temporary restoration would be required due to erosion from storm events, soils may be impacted during restoration activities.

4.3.1.4 Public Health and Safety

With the No Action Alternative, no WINDO projects involving stormwater management activities would be completed. Certain areas of the base have become inundated during past storm events. This would continue with this alternative, creating a potential public safety hazard if emergency service vehicles access was restricted because of flood water.

4.3.1.5 Socioeconomics/Environmental Justice

There are no socioeconomic or Environmental Justice issues at Dyess AFB.

4.3.1.6 Noise

The No Action Alternative would not impact noise.

4.3.1.7 Air Quality

The No Action Alternative would not impact air quality.

4.3.1.8 Water Resources

The No Action Alternative would not have an impact on surface water or groundwater. All surface water flooding and erosion currently experienced at Dyess AFB would continue with this alternative.

4.3.1.9 Biological Resources

Wetlands

The No Action Alternative would not impact any wetlands at Dyess AFB.

Vegetation

The No Action Alternative would not impact any vegetation at Dyess AFB.

Threatened and Endangered Species

The No Action Alternative would not impact any threatened or endangered species at Dyess AFB.

Terrestrial Wildlife

The No Action Alternative would not impact wildlife at Dyess AFB.

Aquatic Resources

The No Action Alternative would not impact aquatic species at Dyess AFB.

4.3.1.10 Cultural Resources

The No Action Alternative would not impact cultural resources.

4.3.1.11 Hazardous and Toxic Materials and Wastes

The No Action Alternative would not impact any hazardous materials.

4.3.1.12 Environmental Restoration Program

The No Action Alternative would not impact the ERP.

4.3.1.13 Cumulative Impacts

The No Action Alternative would not produce any cumulative impacts greater in scope or magnitude than those described for each individual environmental resource.

4.3.2 Stormwater Management Projects

4.3.2.1 Climate and Meteorology

Construction of stormwater conveyance projects would not impact climate or meteorology.

4.3.2.2 Topography

In general, stormwater conveyance features would not impact topography. However, if a drainage ditch would be widened, deepened, or rerouted with this alternative, a minor impact on topography may occur. Dyess AFB is relatively flat, and any drainage ditch enhancements would not significantly alter the topography of the area.

4.3.2.3 Geology and Soils

Construction of stormwater management projects would not impact geology. A temporary impact to local soils would be experienced during construction and excavation. BMPs (e.g., watering down the work area) would be utilized during excavation activities if dust and wind erosion were to become a problem.

If work would be conducted in a drainage channel, the work would be performed from the bank to the extent possible. Temporary diversion of flow may be required to minimize potential

impacts to soil erosion. BMPs, including hay bales and silt fences, would be utilized to minimize erosion. After the completion of construction activities, stream restoration measures may be required to restore the project area to natural and stabilized conditions.

4.3.2.4 Public Health and Safety

All work sites would be surrounded by orange mesh fence to limit access to authorized personnel. In addition, Dyess AFB is a restricted access facility and construction activities would not impact emergency services. Therefore, no adverse impacts on public health or safety would be expected with any construction-related activities.

4.3.2.5 Socioeconomics/Environmental Justice

There are no socioeconomic or Environmental Justice issues at Dyess AFB. A small, beneficial economic impact to the Abilene area may result due to the purchase of goods and services associated with this alternative.

4.3.2.6 Noise

There may be a temporary increase in noise levels in the immediate project area during construction activities. This impact would be limited to daytime work hours. Since Dyess AFB is an active military base with daily airfield operations (landings and takeoffs), a temporary, localized increase in noise would not result in a significant adverse impact to the base community. Construction activities would not impact the Dyess AFB AICUZ guidelines.

4.3.2.7 Air Quality

Short-term, localized impacts to air quality may result from construction activities. Impacts would likely result from fossil fuel use, particulate emissions from soil disturbance, and use of materials containing VOCs. Fossil fuel emissions would produce carbon monoxide, nitrogen oxides, sulfur dioxide, and hazardous pollutants. BMPs would be utilized to reduce any particulate emissions. All impacts would be temporary and would not result in a significant environmental impact.

4.3.2.8 Water Resources

Construction of stormwater management facilities would not have a significant impact on groundwater resources. Repairing or stabilizing an embankment using “hard” engineering techniques (e.g., rock riprap) may result in an impact to water quality. However, utilizing bioengineered techniques (e.g., vegetation plantings, rootwads, geotextile fabrics) would minimize these impacts and would likely provide mitigation from erosion of fill material.

Installation of culverts or road crossings, and upgrading drainage ditches would reduce the risk of flooding in developed areas and provide a more efficient conveyance of stormwater. By increasing flow efficiency, the reduced risk of flooding to adjacent developed areas would potentially have a beneficial impact on water quality by reducing the area exposed to pollutant sources. Adverse impacts could also result from this alternative if enhancing the capacity of

drainage channel would increase downstream flows beyond the capacity of the natural waterway. An adverse impact to water quality may result if the increased flow would prevent settling of silt and suspended materials in addition to increasing scouring and erosion.

For any projects that would impact downstream flow or would involve work in a floodplain, a hydraulic or hydrologic study would be completed to ensure the project would not result in an increased flood hazard in the downstream areas.

If work would be performed in a drainage channel, the work would be performed from the bank to the extent possible. Temporary diversion of flow may be required to minimize potential impacts to water quality. BMPs, including hay bales and silt fences, would be utilized to minimize erosion and downstream migration of pollutants. After the completion of construction activities, stream restoration measures may be required to restore the project area to natural and stabilized conditions.

4.3.2.9 Biological Resources

Wetlands

If an action were to occur in one of the wetlands designated on Figure 7, the action would need to comply with EO 11990 and AFI 32-7064. Stormwater management actions that would be located in wetlands would be designed to enhance the function of the wetland and not result in adverse impacts. If potential adverse impacts would be expected, appropriate mitigation would be coordinated with the Dyess AFB Natural Resources Manager and the USACE. These projects would require a FONPA, per AFI 32-7061, and would not be covered with this PEA.

Vegetation

These projects would potentially impact riparian vegetation and waterways. There is the potential that work involving a watercourse could facilitate the spread of invasive species if any removed vegetation is taken to an area not previously occupied by the particular species. This potential impact would be minimized by ensuring all vehicles transporting vegetative debris are covered while in transit. Potential short-term impacts to vegetation would occur during construction from the operation of machinery and equipment. Following construction activities, the area would be stabilized and revegetated according to the INRMP (URS 2004a). This may provide a beneficial impact as bank stabilization or modifying a water crossing would reduce long-term scour and sedimentation.

Threatened and Endangered Species

No impact on threatened or endangered species. All activities would be conducted in accordance with the Texas horned lizard management procedures outlined in the INRMP (URS 2004a). If any individuals were encountered during project activities, all activities would be halted and the Natural Resources Manager contacted. Construction activities would not resume without concurrence from the Natural Resources Manager.

Terrestrial Wildlife

These actions may temporarily impact wildlife in the project area during construction, such as displacement or mortality of individuals. Impacts to individuals would not be significant, and would not result in an impact to the biological community.

Aquatic Resources

Aquatic species do not reside in Little Elm Creek or any other drainages on base. Therefore, no direct impacts to aquatic species would result from these project types. However, Little Elm Creek drains to Big Elm Creek and Lake Fort Phantom Hill. This lake provides recreational fishing for the area. Any impacts that would result in impacts to water quality may impact aquatic resources in the lake. BMPs would be utilized to minimize the potential of downstream migration of pollutants that may impact downstream resources.

4.3.2.10 Cultural Resources

Dyess AFB does not have any significant cultural resources. However, if archaeological resources are encountered during any ground disturbing activity, construction will be halted and the Cultural Resources Manager shall be notified. Construction will not resume without the approval of the Cultural Resources Manager.

4.3.2.11 Hazardous and Toxic Materials and Wastes

Construction activities may disturb hazardous materials present at the project site. A review of the project site would be performed prior to any construction activities to determine if hazardous materials or wastes are present at the location. Dyess AFB does not have any underground storage tanks (USTs) that would be impacted by this alternative. If any hazardous materials are encountered, or if the construction activity resulted in a spill or leak of hazardous or petroleum products, coordination with CEV would be required to ensure the proper disposal and mitigation of the material.

4.3.2.12 Environmental Restoration Program

No activities would be performed on an active ERP site. If a project were proposed on a closed ERP site, the project would be reviewed by CEV and CERR to ensure any activities would be compliant with the closure certification.

4.3.2.13 Cumulative Impacts

Construction of multiple actions that result in efficient stormwater conveyance may result in a cumulative impact on downstream flood potential and the overall conveyance of stormwater. Therefore, it is important for a hydrological or hydraulic study to be performed on any project that may impact downstream flows. If the hydrologic or hydraulic study results do not indicate an increased potential for downstream flooding, adverse cumulative impacts would not be expected. If the increased efficiency of stormwater conveyance would not impact downstream

SECTION FOUR

Environmental Consequences

flooding, the combined effect of multiple actions would provide a beneficial impact on the overall stormwater management program at Dyess AFB.

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- U.S. Army Corps of Engineers (USACE). 1995. Delineation of Jurisdictional Waters of the United States and Wetlands on Dyess Air Force Base, Abilene, Texas. Prepared for United States Air Force Air Combat Command, Langley Air Force Base, Virginia.

TABLE 1
DETERMINATION OF NEPA ANALYSIS
FISCAL YEAR 2004 WING INFRASTRUCTURE DEVELOPMENT PROJECTS
DYESS AIR FORCE BASE

Project Number	Project Title	CATEX Applies?	CATEX ¹ Number	PEA Applies?
FNWZ 00-0007	Repair A/C Mtn Shop 8130	Y	A2.3.9	N
FNWZ 00-0024	Rpr Hosp W Parking Area	Y	A2.3.10	N
FNWZ 00-0038P1	Install Fall Protection 5110	Y	A2.3.8	N
FNWZ 00-0038P2	Install Fall Protection (4 Hangars)	Y	A2.3.8	N
FNWZ 00-0041	Inst Break Room Sink, 5110	Y	A2.3.8	N
FNWZ 00-0073	Cons Dorm Volleyball Courts	N		Y
	Perimeter Fence in R/W Lateral Clear Surface (Runway 16)	Y	A2.3.14	N
FNWZ 00-0083	Liquid Fuels Vaults	N		Y
FNWZ 00-0085	Rpl Afld Emerg Gen 3010/3202	Y	A2.3.9	N
FNWZ 000086	Longitudinal Grade (West of Runway)	N		Y
FNWZ 00-0101	Heritage Club Renovation-Ballroom	Y	A2.3.8	N
FNWZ 00-0102	Utility Poles (Runway 16 Clear Zone)	N		Y
FNWZ 00-0105	Hazard Cargo Pad	N		Y
	Engine Test Pad & Bldg 5305 (Runway 34 Clear Zone)	N		Y
FNWZ 00-0106	Transformer Unit (Sequential Flasher) (R/W 16 Clear Zone)	Y	A2.3.13	N
FNWZ 00-0108	Private Structure (Runway 16 Clear Zone)	N		Y
FNWZ 00-0109	Hazardous Cargo Pad	N		Y
FNWZ 00-0110	Perimeter Fence Line (Runway 34 Clear Zone)	Y	A2.3.9	N
FNWZ 000114	Longitudinal Grade (Runway 34 Clear Zone)	N		Y
FNWZ 00-0115	Mesquite Trees ³	Y	A2.3.11	N
FNWZ 00-0122	Rpl VOQ Windows	Y	A2.3.10	N
FNWZ 00-0126	Inst Dorm Rec Area Lighting	Y	A2.3.8	N
FNWZ 01-0016	Rpl Roof 7007	Y	A2.3.10	N
FNWZ 01-0034	Rpr Firing Range	Y	A2.3.14	N
FNWZ 01-0099	Heritage Club-Enlisted Lounge	N		Y
FNWZ 01-0100	Install Valve Control Hydrant Sys	Y	A2.3.12	N
FNWZ 01-3006	Fire/Crash Rescue Station	N		Y
FNWZ 02-0008	Demo Family Support 11900	N		Y
FNWZ 02-0013	Modify Product Recovery Sys	Y	A2.3.9	N
FNWZ 02-0014	Rpr Ball Valves	Y	A2.3.9	N
FNWZ 02-0016	Cons Water Collection Sys	N		Y
FNWZ 02-0017	Rpr Product Recovery Tanks	Y	A2.3.9	N
FNWZ 02-0018	Install Filter Separators	Y	A2.3.12	N
FNWZ 02-0019	Install Gates 5224	Y	A2.3.14	N
FNWZ 02-0020	Install Gates 9006	Y	A2.3.14	N
FNWZ 02-0033	Resurface Base Tennis Courts	Y	A2.3.10	N
FNWZ 02-0037	Const Heritage Pool Gazebo	N		Y
FNWZ 02-0038	Bowling Center Snack Bar	Y	A2.3.8	N
FNWZ 02-0046	Install FL Vehicle Barriers	Y	A2.3.14	N
FNWZ 02-0050	Switchboard 7318 Barriers	Y	A2.3.14	N
FNWZ 02-0063	Rpr 317AG HQ Parking	Y	A2.3.10	N
FNWZ 02-0064	Rpr Dorm HVAC 6113	Y	A2.3.9	N
FNWZ 02-0065	Rpr Dorm HVAC 6114	Y	A2.3.9	N
FNWZ 02-0066	Rpr VOQ HVAC 6135	Y	A2.3.9	N
FNWZ 02-0097	Resurface Engine Shop Fl 4311	Y	A2.3.8	N
FNWZ 02-0098	Install Visitor Center Fire Alarm	Y	A2.3.9	N

TABLE 1
DETERMINATION OF NEPA ANALYSIS
FISCAL YEAR 2004 WING INFRASTRUCTURE DEVELOPMENT PROJECTS
DYESS AIR FORCE BASE

Project Number	Project Title	CATEX Applies?	CATEX ¹ Number	PEA Applies?
FNWZ 02-0117	Rpl Carpet 7004	Y	A2.3.8	N
FNWZ 02-0128	Rpl Carpet 9109	Y	A2.3.8	N
FNWZ 02-0137P2	Rpl Kit/Dinning/Bath Floor	Y	A2.3.10	N
FNWZ 02-1101	Construct Shopping Center	N		Y
FNWZ 02-1102	Construct Mini-Mall	N		Y
FNWZ 02-1105	Postal Center	N		Y
FNWZ 02-1109	Demo Bank/PO/BX	N		Y
FNWZ 02-1111	Demo Burger King	N		Y
FNWZ 02-1112	Construct Banking Facility	N		Y
FNWZ 02-3006	ADAL B-1B Engine Regional Repair Center	N		Y
FNWZ 02-3007	Armament Maintenance/Storage Facility	N		Y
FNWZ 02-4101	Divert Storm Water (DRMO)	N		Y
FNWZ 03-0008	Demo Golf Course Fac 11975	N		Y
FNWZ 03-0009	Rpr Hydrant Sys Pumps	Y	A2.3.12	N
FNWZ 03-0016	Upgrade Furnishings, VAQ (7218)	Y	A2.3.1	N
FNWZ 030035	Above-Ground Fuel Tank, Bldg 3010 (Runway 16 ILS Glideslope Emergency Generator)	Y	A2.3.14	N
FNWZ 030038	Above-Ground Fuel Tank, Bldg 3202 (TACAN)	Y	A2.3.9	N
FNWZ 030039	Drainage Ditch and Culvert (Runway 34 Clear Zone)	N		Y
FNWZ 030040	Drainage Ditch and Culvert (Primary Surface, Runway 16)	N		Y
FNWZ 03-0043	Rpr 28BS latrines	Y	A2.3.8	N
FNWZ 03-0045	Rpr 7Og HQ 8030	Y	A2.3.10	N
FNWZ 03-0046	Rpr Fuel Tank Containment	Y	A2.3.14	N
FNWZ 03-0050	Cons CATM Spt Fac	N		Y
FNWZ 03-0052	Repair Perimeter Fence	Y	A2.3.9	N
FNWZ 03-0053	Substation B Barriers	Y	A2.3.14	N
FNWZ 03-0054	Substation C Barriers	Y	A2.3.14	N
FNWZ 03-0060	Rpl 4-BR HWH	Y	A2.3.9	N
FNWZ 03-0061	Hardwire CO Detectors	Y	A2.3.10	N
FNWZ 03-0068	Rpl Carpet 9030	Y	A2.3.8	N
FNWZ 03-0069	Rpl Carpet 7405	Y	A2.3.8	N
FNWZ 03-0078	Rpr TW H	Y	A2.3.10	N
FNWZ 03-0081	317AG HQ Barriers	Y	A2.3.14	N
FNWZ 03-0092	Substation A Barriers	Y	A2.3.14	N
FNWZ 03-0096	Demo Dental Clinic 6133	N		Y
FNWZ 03-3000	Longitudinal Grading	N		Y
FNWZ 03-3001	Repair 4-Bay Hangar 5020	Y	A2.3.10	N
FNWZ 03-3002	BCE Complex	N		Y
FNWZ 03-3004	Library/Education Center	N		Y
FNWZ 03-3007	Repair 2-Bay Hangar 4314	Y	A2.3.10	N
FNWZ 03-4027	Cons Paint Spray Both	N		Y
FNWZ 04-0002	Rpr Ave C	Y	A2.3.10	N
FNWZ 04-0006	Consolidated Skills Center	N		Y
FNWZ 04-0007	Upgrade Furnishings, TLF	Y	A2.3.1	N
FNWZ 04-0009	Skeet and Trap Range	N		Y
FNWZ 04-0010	Upgrade Furnishings, VOQ	Y	A2.3.1	N

TABLE 1
DETERMINATION OF NEPA ANALYSIS
FISCAL YEAR 2004 WING INFRASTRUCTURE DEVELOPMENT PROJECTS
DYESS AIR FORCE BASE

Project Number	Project Title	CATEX Applies?	CATEX ¹ Number	PEA Applies?
FNWZ 04-0011	Riding Stable Barn	N		Y
FNWZ 04-0012	Mini-Golf Course	N		Y
FNWZ 04-0028	Const Addn'l Parking/Lighting	N		Y
FNWZ 04-0030	Recoat Interior Grnd Water Tank	Y	A2.3.9	N
FNWZ 04-0032	Rpr CEX/EOD Fac 7007	Y	A2.3.10	N
FNWZ 04-0036	Install Mech Rm Floor Drains	Y	A2.3.8	N
FNWZ 04-0037	Install GFI Outlets	Y	A2.3.8	N
FNWZ 04-0038	Rpl Main Elec Service panel	Y	A2.3.9	N
FNWZ 04-0041	Rpr 2nd St	Y	A2.3.10	N
FNWZ 04-0042	Urgent RW Repairs	Y	A2.3.10	N
FNWZ 04-0043	Rpl Mech Rm Doors	Y	A2.3.9	N
FNWZ 04-0050	Demo C-130 Parts Store 4318	N		Y
FNWZ 04-0051	Demo Alert Visit Fac 4126	N		Y
FNWZ 04-0052	Demo 8129	N		Y
FNWZ 04-0052	Demo 8133	N		Y
FNWZ 04-0053	Add RW 16/34A Overt/Covert Ltg	N		Y
FNWZ 04-0054	Add RW 16/34B Overt/Covert Ltg	N		Y
FNWZ 04-0056	Rpr Tye LZ Surface	Y	A2.3.10	N
FNWZ 04-0057	NCC Barriers 7320	Y	A2.3.14	N
FNWZ 04-0058	Install HAZMAT HVAC 7010	Y	A2.3.8	N
FNWZ 04-0059	Relocate Hangar Door Switches	Y	A2.3.9	N
FNWZ 04-0064	Inst Counter Balanced FL Barriers	Y	A2.3.14	N
FNWZ 04-0065	Install Mylar HRF	Y	A2.3.14	N
FNWZ 04-0072	7LRS Barriers	Y	A2.3.14	N
FNWZ 04-0073	7MXG Barriers	Y	A2.3.14	N
FNWZ 04-0088	Cons Trash Can Screens	Y	A2.3.14	N
FNWZ 04-0089	Rpl Carpet, 20 Units	Y	A2.3.8	N
FNWZ 04-0090	Rpl Tile, Kit/dining/bath, 30un	Y	A2.3.8	N
FNWZ 04-0091	Rpl Digital Setback T'Stats	Y	A2.3.9	N
FNWZ 04-0092	Rpl CASS 400HZ Circuits	Y	A2.3.9	N
FNWZ 04-0093	Rpl Carpet 6112	Y	A2.3.8	N
FNWZ 04-0094	Rpl Carpet 6127	Y	A2.3.8	N
FNWZ 04-0098	Rpl Carpet 9198	Y	A2.3.8	N
FNWZ 04-0099	Rpl Carpet 9329	Y	A2.3.8	N
FNWZ 04-0100	Rpl Carpet 7238	Y	A2.3.8	N
FNWZ 04-0101	Rpl Carpet 8202	Y	A2.3.8	N
FNWZ 04-0102	Rpl Carpet 1st Fl 4120	Y	A2.3.8	N
FNWZ 04-0103	Rpl Carpet 2nd Fl 7040	Y	A2.3.8	N
FNWZ 04-0105	Rpl Flooring 9223	Y	A2.3.8	N
FNWZ 04-0106	Install Bird Netting 5020	Y	A2.3.14	N
FNWZ 04-0107	Rpr Wing 2A	Y	A2.3.10	N
FNWZ 04-0108	Cons CAC Gazebo	N		Y
FNWZ 04-0109	Demo MTF Boiler Plant 9202	N		Y
FNWZ 04-3005	FL Arcft Parts Store	N		Y
FNWZ 04-3006	Repair RW Asphalt Edges	Y	A2.3.10	N
FNWZ 04-4026	Replace Fire Hydrants	Y	A2.3.9	N
FNWZ 05-0006	Bowling Mechanics Room (Add/Alter)	Y	A2.3.8	N
FNWZ 05-0007	Heritage Club Barriers	Y	A2.3.14	N
FNWZ 05-0009	Commissary Barriers	Y	A2.3.14	N
FNWZ 05-0010	Control Tower Barriers	Y	A2.3.14	N

TABLE 1
DETERMINATION OF NEPA ANALYSIS
FISCAL YEAR 2004 WING INFRASTRUCTURE DEVELOPMENT PROJECTS
DYESS AIR FORCE BASE

Project Number	Project Title	CATEX Applies?	CATEX ¹ Number	PEA Applies?
FNWZ 05-0011	Longhorn Dining Barriers	Y	A2.3.14	N
FNWZ 05-0012	Fitness Center Barriers	Y	A2.3.14	N
FNWZ 05-0016	Demo OSI 7313	N		Y
FNWZ 05-0017	DEMO CDC 7225-7	N		Y
FNWZ 05-0018	Demo 7OG HQ 5008	N		Y
FNWZ 05-0026	Demo Nose Dock 5018	N		Y
FNWZ 05-0027	Rpr Mobility Staging Pavements	Y	A2.3.10	N
FNWZ 05-0028	Rpl TW A Slabs	Y	A2.3.9	N
FNWZ 05-0029	Rpr TW E @TWA	Y	A2.3.9	N
FNWZ 05-0030	Seal Apron Jts/Cracks B-1 North	Y	A2.3.10	N
FNWZ 05-0031	Renovate DV Quarters 7421	Y	A2.3.8	N
FNWZ 05-0032	Renovate DV Quarters 7422	Y	A2.3.8	N
FNWZ 05-0033	Demo Latrine 4306	N		Y
FNWZ 05-0034	Munitions Assembly Pad	N		Y
FNWZ 05-0035	Munitions Covered Stor Bldg	N		Y
FNWZ 05-0036	Install Vehicle Barrier, Arnold & LA	Y	A2.3.14	N
FNWZ 05-0038	Alter Fitness Ctr, 7104	Y	A2.3.8	N
FNWZ 05-3001	Replace Family Housing PH5	N		Y
FNWZ 05-3002	Consolidated Support Fac	N		Y
FNWZ 05-3003	Rpr Fire Det/Supr Sys	Y	A2.3.9	N
FNWZ 05-3004	Golf Course Cart Paths	N		Y
FNWZ 05-3007	C-130 Multipurpose Maint Hangar	N		Y
FNWZ 05-3010	Replace Elec Dist Sys	Y	A2.3.9	N
FNWZ 05-3011	Replace Water Mains	Y	A2.3.12	N
FNWZ 05-3012	Repair RW Concrete Keel	Y	A2.3.10	N
FNWZ 05-3013	Repair Base Streets	Y	A2.3.10	N
FNWZ 05-3014	Storage Igloos	N		Y
FNWZ 05-4015	Rpl Anodes	Y	A2.3.9	N
FNWZ 05-4205	Mtn Water System	Y	A2.3.12	N
FNWZ 06-3001	Replace Family Housing PH6	N		Y
FNWZ 06-3002	Construct New TLF	N		Y
FNWZ 06-3003	Batting Cage	N		Y
FNWZ 06-3004	Golf Course Restrooms	N		Y
FNWZ 06-3005	Consolidated Fab Flt Shop	N		Y
FNWZ 06-3006	317 AG Group Headquarters	N		Y
FNWZ 06-3007	Replace Gas Mains	Y	A2.3.12	N
FNWZ 06-3011	Add/Alter Commissary	Y	A2.3.8	N
FNWZ 06-4006	Paint Interior Water Storage Tanks	Y	A2.3.10	N
FNWZ 06-4007	Rpr CI Water Mains	Y	A2.3.12	N
FNWZ 06-4009	Rpr Drinking Water Mains	Y	A2.3.12	N
FNWZ 06-4010	Rpr Lift Stations, 9 EA	Y	A2.3.10	N
FNWZ 07-0005	Golf Club House/Cart Barn	N		Y
FNWZ 07-3001	Replace Family Housing PH7	N		Y
FNWZ 07-3002	Consolidated Club	N		Y
FNWZ 07-3003	Upgrade Golf Course Greens	N		Y
FNWZ 07-3004	FamCamp (Off Base)	U ²		
FNWZ 07-4001	Install Paint Booth	N		Y
FNWZ 07-4006	Install Emission Controls	Y	A2.3.8	N
FNWZ 07-4025	Mtn Water System	Y	A2.3.10	N
FNWZ 08-3001	C-130 3-Bay Maint Hangar	N		Y

TABLE 1
DETERMINATION OF NEPA ANALYSIS
FISCAL YEAR 2004 WING INFRASTRUCTURE DEVELOPMENT PROJECTS
DYESS AIR FORCE BASE

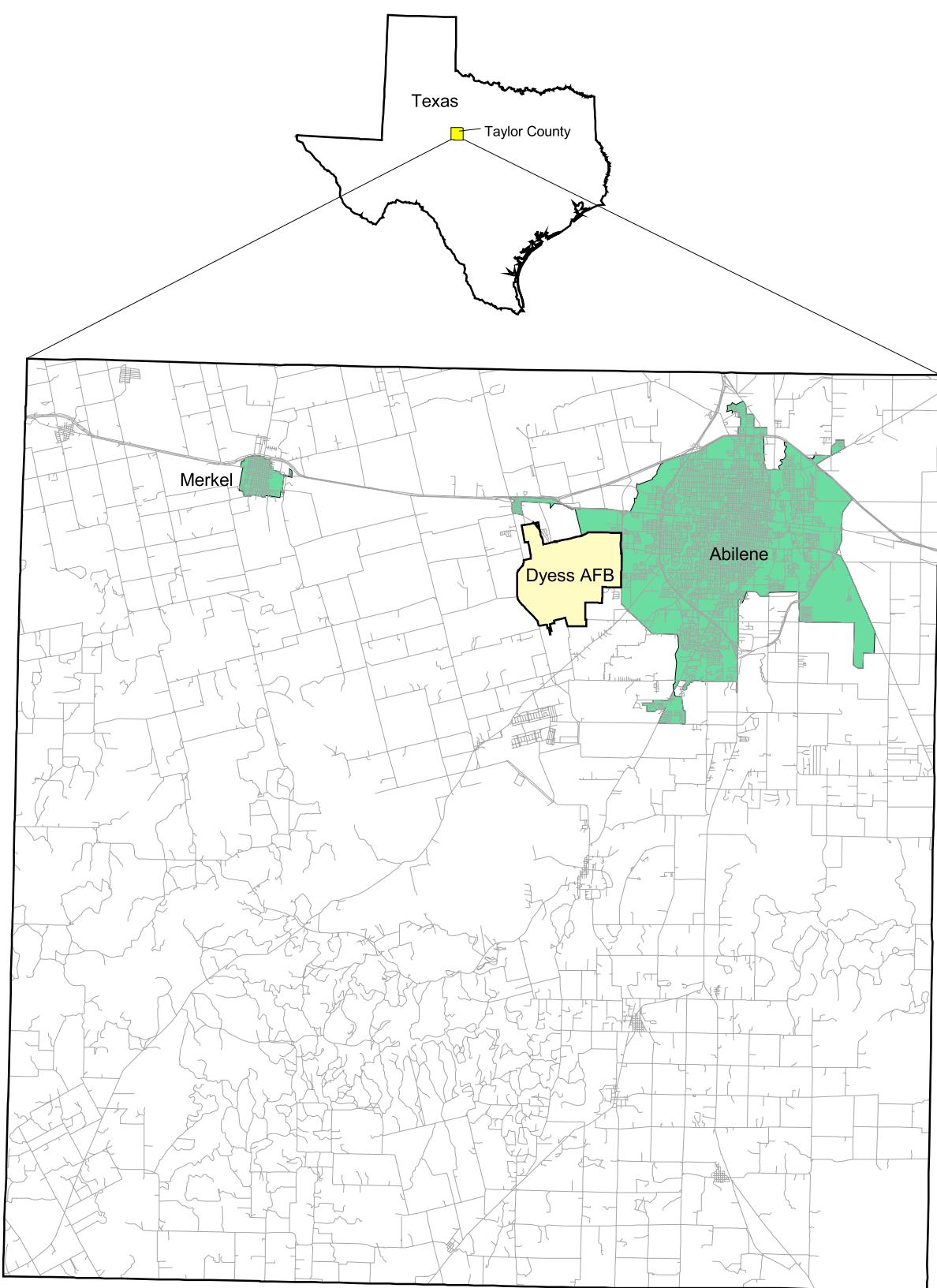
Project Number	Project Title	CATEX Applies?	CATEX ¹ Number	PEA Applies?
FNWZ 87-0046A/B	Altr/Rpr Base Theater 87-0046A/B	Y	A2.3.8	N
FNWZ 88-0031	Cons Chapel Parking 6220	N		Y
FNWZ 92-0028	Renovate DV Quarters 7420	Y	A2.3.10	N
FNWZ 92-0055	Rpl Halon FP Systems	Y	A2.3.9	N
FNWZ 92-0082	YOUTH CENTER CONSTRUCTION	N		Y
FNWZ 94-0020	Rpl Bowling Alley Roof	Y	A2.3.10	N
FNWZ 94-0021	Construct Rec Field	N		Y
FNWZ 95-0032	Rpr/Alter VOQ, 7407	Y	A2.3.10	N
FNWZ 95-0095	Replace Elec Dist Sys, Ph C	Y	A2.3.9	N
FNWZ 95-0137	Cons Dorm Tennis Courts	N		Y
FNWZ 96-0012	Replace Elec Dist Sys, Ph D	Y	A2.3.9	N
FNWZ 96-0026	Provide ADA Access, 7316	Y	A2.3.8	N
FNWZ 97-0029P2	Rpr Ctl Twr Leaks, 4300, Ph2	Y	A2.3.10	N
FNWZ 98-0029	Rpr VOQ 7405	Y	A2.3.10	N
FNWZ 98-0035	Rpr NCC HVAC, 7320	Y	A2.3.9	N
FNWZ 98-0094	Replace Roof, Bldg 4311	Y	A2.3.10	N
FNWZ 98-0096P2	Rpl Gas Valves	Y	A2.3.9	N
FNWZ 98-0104	Mtn Cathodic Prot Sys 5162	Y	A2.3.10	N
FNWZ 98-0109	Rpl Roof, Mtn Spt Shp, 4309	Y	A2.3.10	N
FNWZ 98-0116	Rpl Water Mains	Y	A2.3.12	N
FNWZ 99-0009	Rpr VOQ/VAQ HVAC	Y	A2.3.9	N
FNWZ 99-0013	Repair 7MSS HVAC, 7232/3	Y	A2.3.9	N
FNWZ 99-0025	Rpl Picnic Lat Stone Finish	Y	A2.3.8	N
FNWZ 99-0027	Rpr VOQ 7409	Y	A2.3.10	N
FNWZ 99-0030	Rpl Hangar Roof 4314	Y	A2.3.10	N
FNWZ 99-0050	Rpr Base Pool 7109	Y	A2.3.9	N
FNWZ 99-0056	Repair A/C Mtn Shop 8130	Y	A2.3.10	N
FNWZ 99-0058	Rpr IMF Roof 9112	Y	A2.3.10	N
FNWZ 99-0078	Expand RV Storage Area	N		Y
FNWZ 99-0080	Replace Flightline Fence	Y	A2.3.9	N
FNWZ 99-3004	Refueling Vehicle Maintenance Shop	N		Y

Notes:

¹ = From AFI 32-7061

² = Project will require further scope definition, siting, and environmental assessment beyond the scope of this Programmatic Environmental Assessment

³ = Mesquite management projects have been evaluated under the Integrated Natural Resources Management Plan

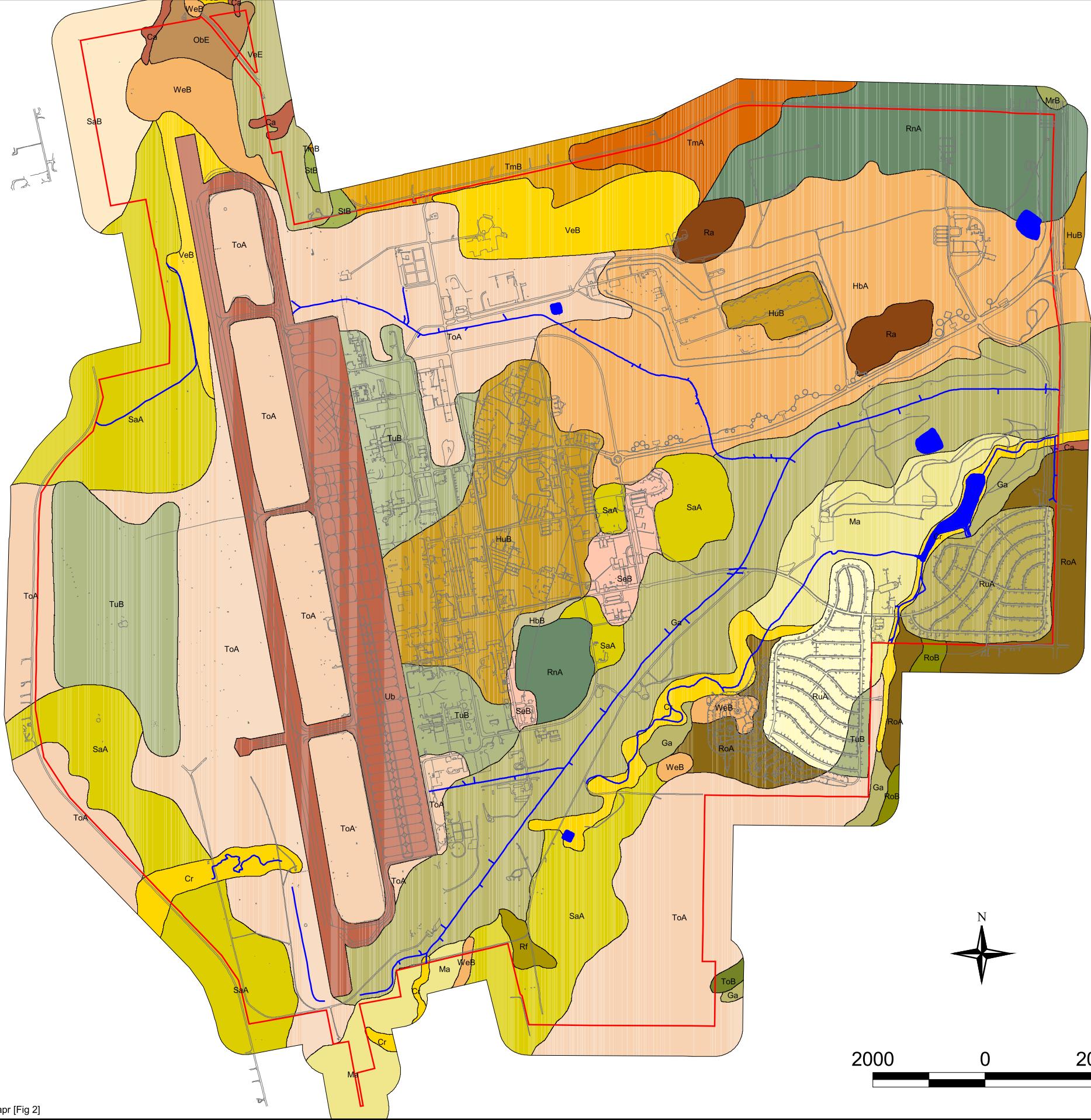


5 0 5 Miles



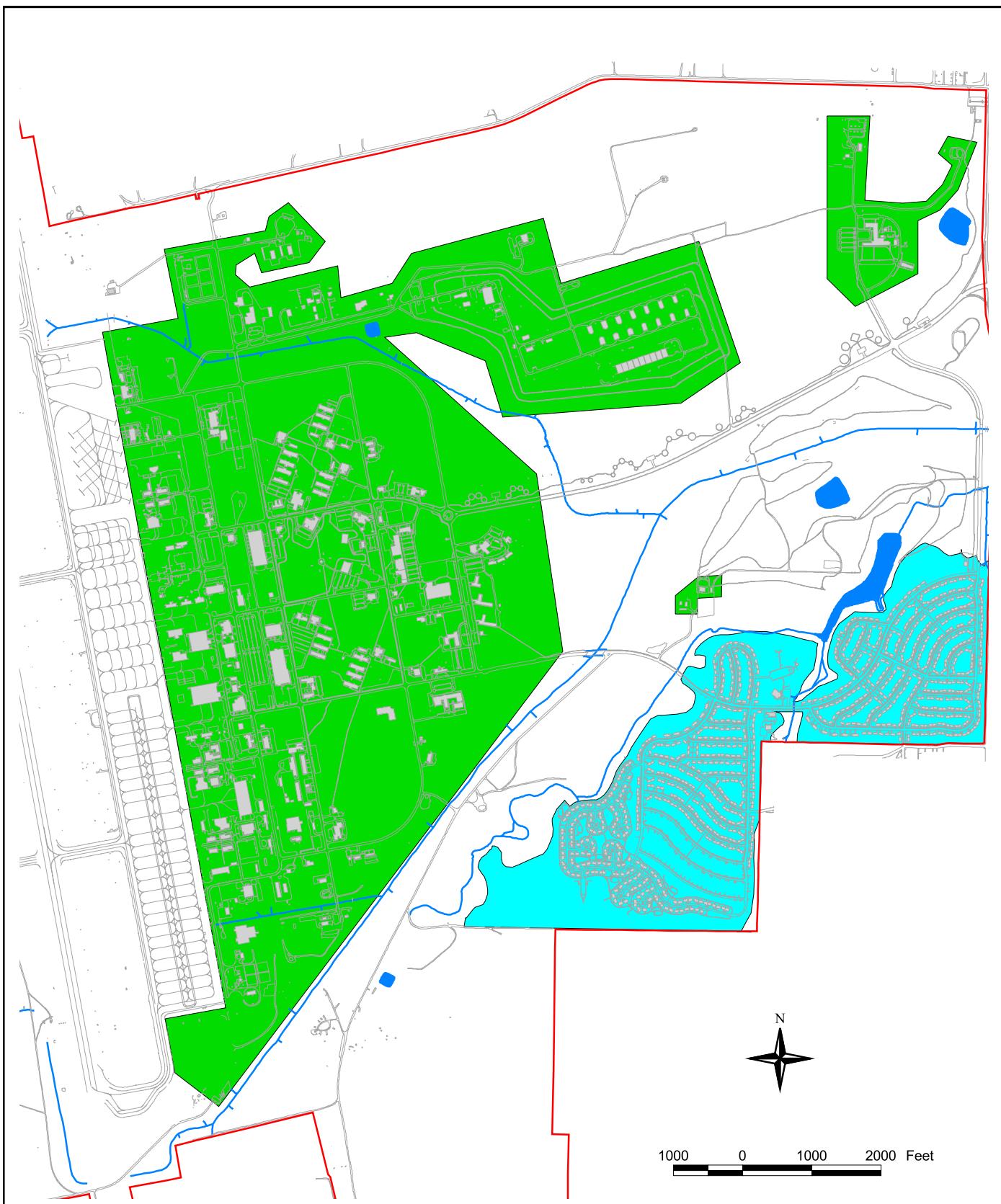
LOCATION OF DYESS AFB
WINDO ENVIRONMENTAL ASSESSMENT
DYESS AIR FORCE BASE, TEXAS

DRN BY: JJZ	DATE: 02/04/05	PROJECT NO.	FIG NO.
CHK'D BY: BEO	REVISION:	16169816	1



SOIL SURVEY MAP
WINDO ENVIRONMENTAL ASSESSMENT
DYESS AIR FORCE BASE, TEXAS

DRN BY: JJZ	02/04/05	PROJECT NO.	FIG NO.
CHK'D BY: BEO	REVISION:	16169816	2



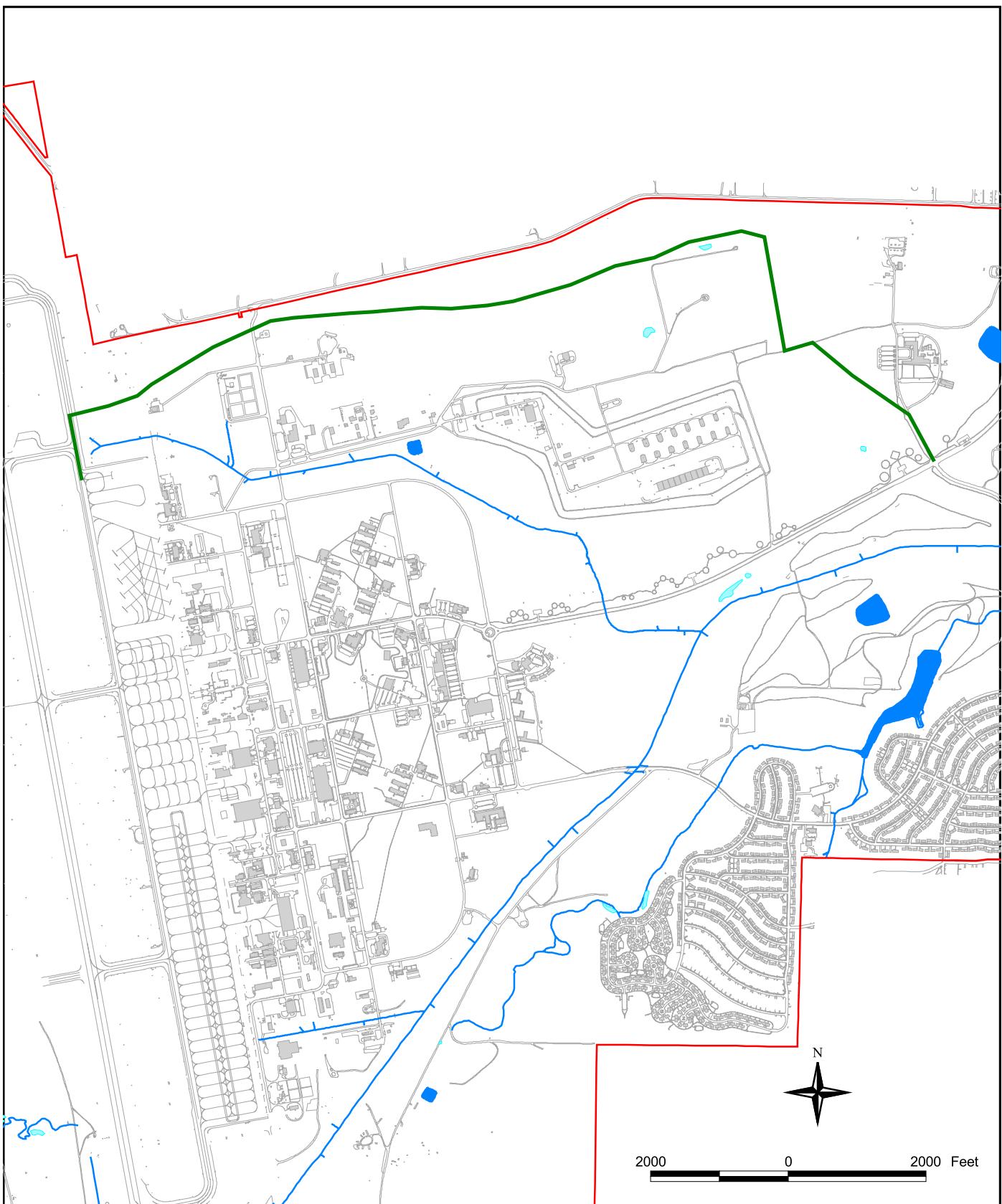
Legend

- | | |
|--------------------|------------------------|
| ■ Base Boundary | ■ Surface Water Bodies |
| ■ Buildings | ■ Residential Areas |
| △ Pavements | ■ Developed Areas |
| △ Creeks/Drainages | |

z:\Dyess_GIS\windo.apr [Fig 3]

DEVELOPED AND RESIDENTIAL AREAS WINDO ENVIRONMENTAL ASSESSMENT DYESS AIR FORCE BASE, TEXAS

DRN BY: JJZ	DATE: 02/04/05	PROJECT NO.	FIG NO.
CHK'D BY: BEO	REVISION:	16169816	3



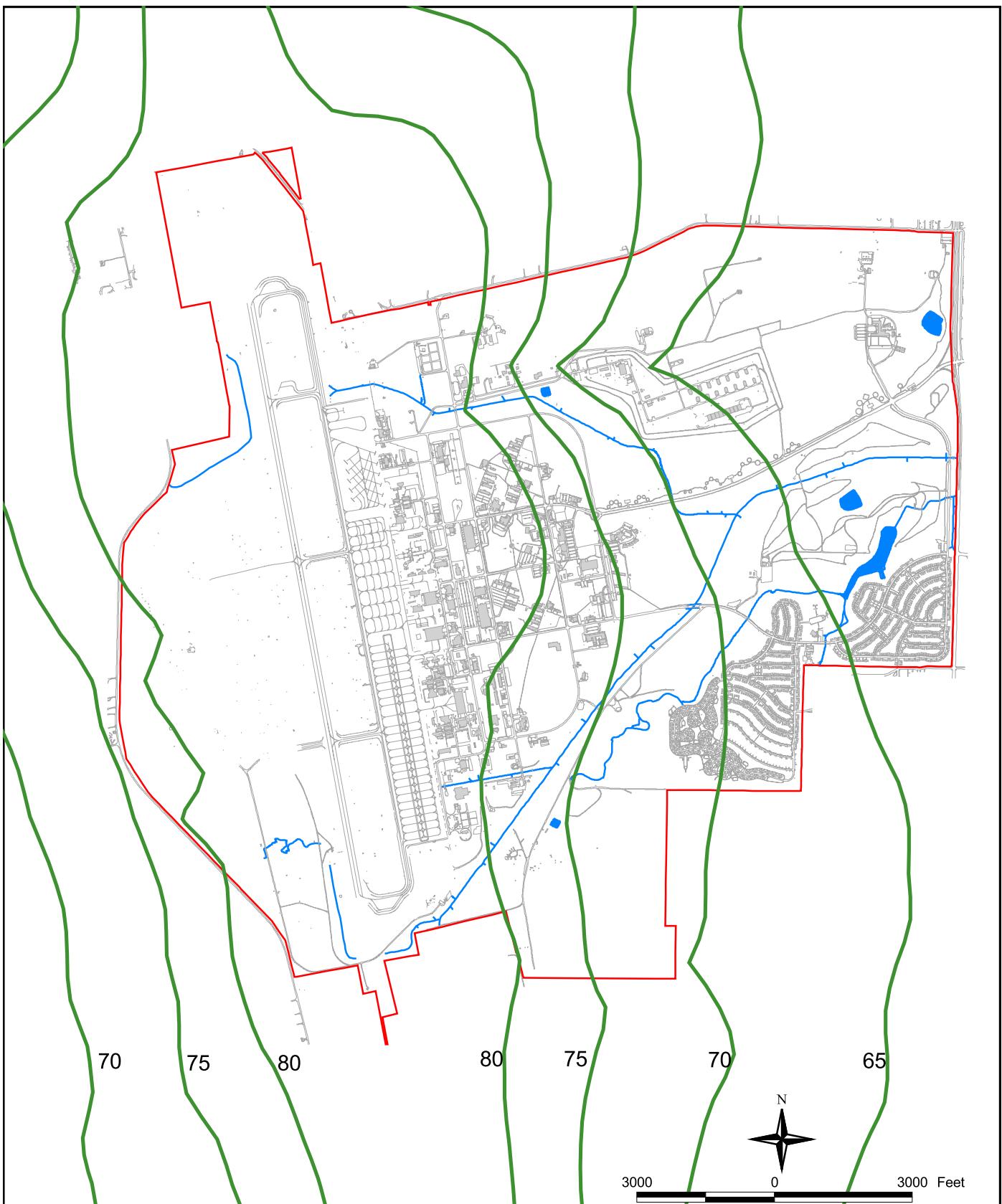
Legend

- | | |
|---------------|----------------------------------|
| Base Boundary | Temporary Aircraft Transfer Path |
| Buildings | Creeks/Drainages |
| Pavements | Surface Water Bodies |

z:\Dyess_GIS\windo.apr [Fig 4]

TEMPORARY AIRCRAFT TRANSFER PATH WINDO ENVIRONMENTAL ASSESSMENT DYESS AIR FORCE BASE, TEXAS

DRN BY: JJZ	DATE: 04/29/05	PROJECT NO.	FIG NO.
CHK'D BY: BEO	REVISION:	16169816	4



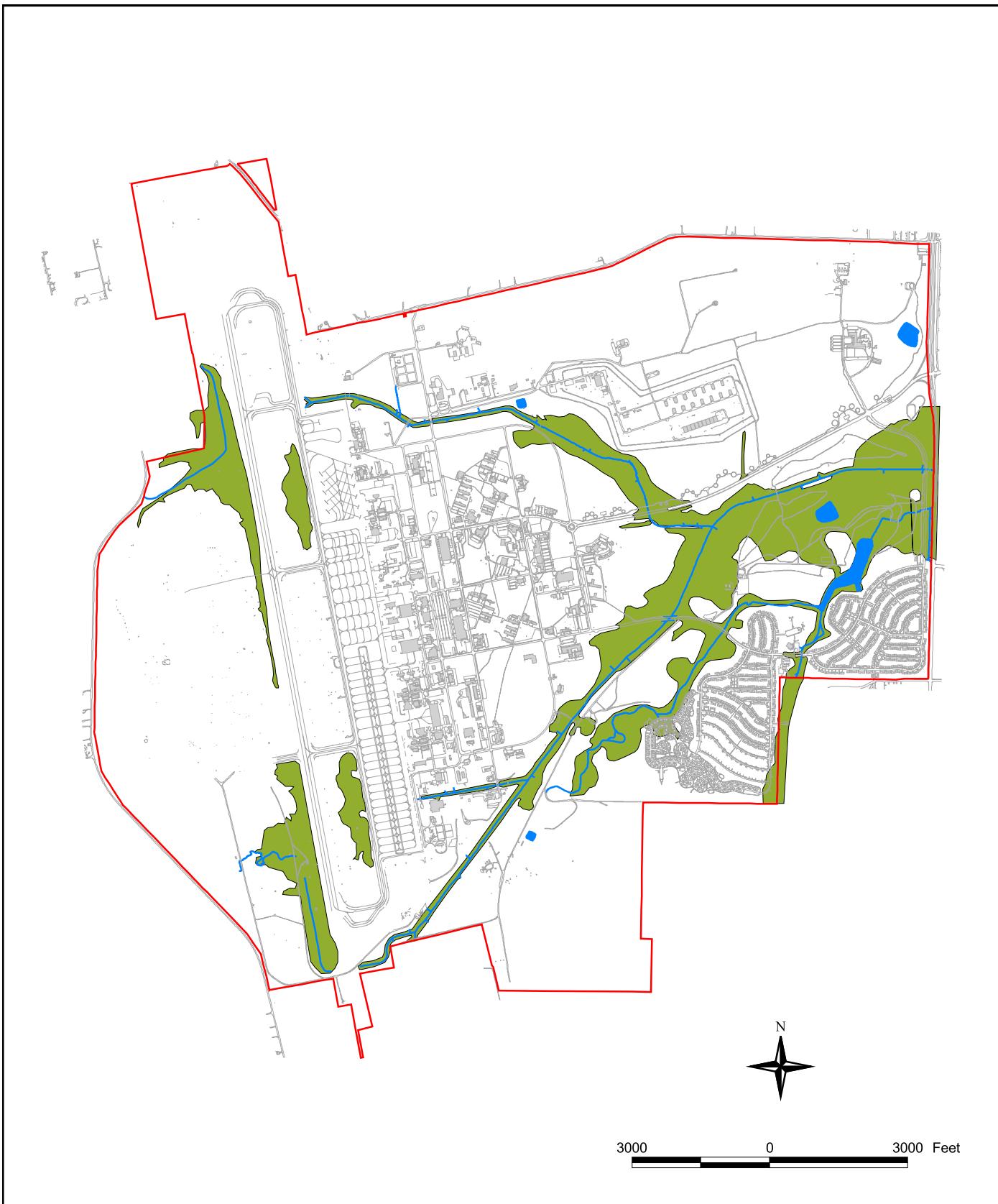
Legend

- Base Boundary
- Buildings
- \ \wedge Pavements
- \wedge\wedge Noise Level Contours (DNL)
- Creeks/Drainages
- Surface Water Bodies

z:\Dyess_GIS\windo.apr [Fig 5]

AICUZ-BASE NOISE CONTOURS
WINDO ENVIRONMENTAL ASSESSMENT
DYESS AIR FORCE BASE, TEXAS

DRN BY: JJZ	DATE: 02/04/05	PROJECT NO.	FIG NO.
CHK'D BY: BEO	REVISION:	16169816	5



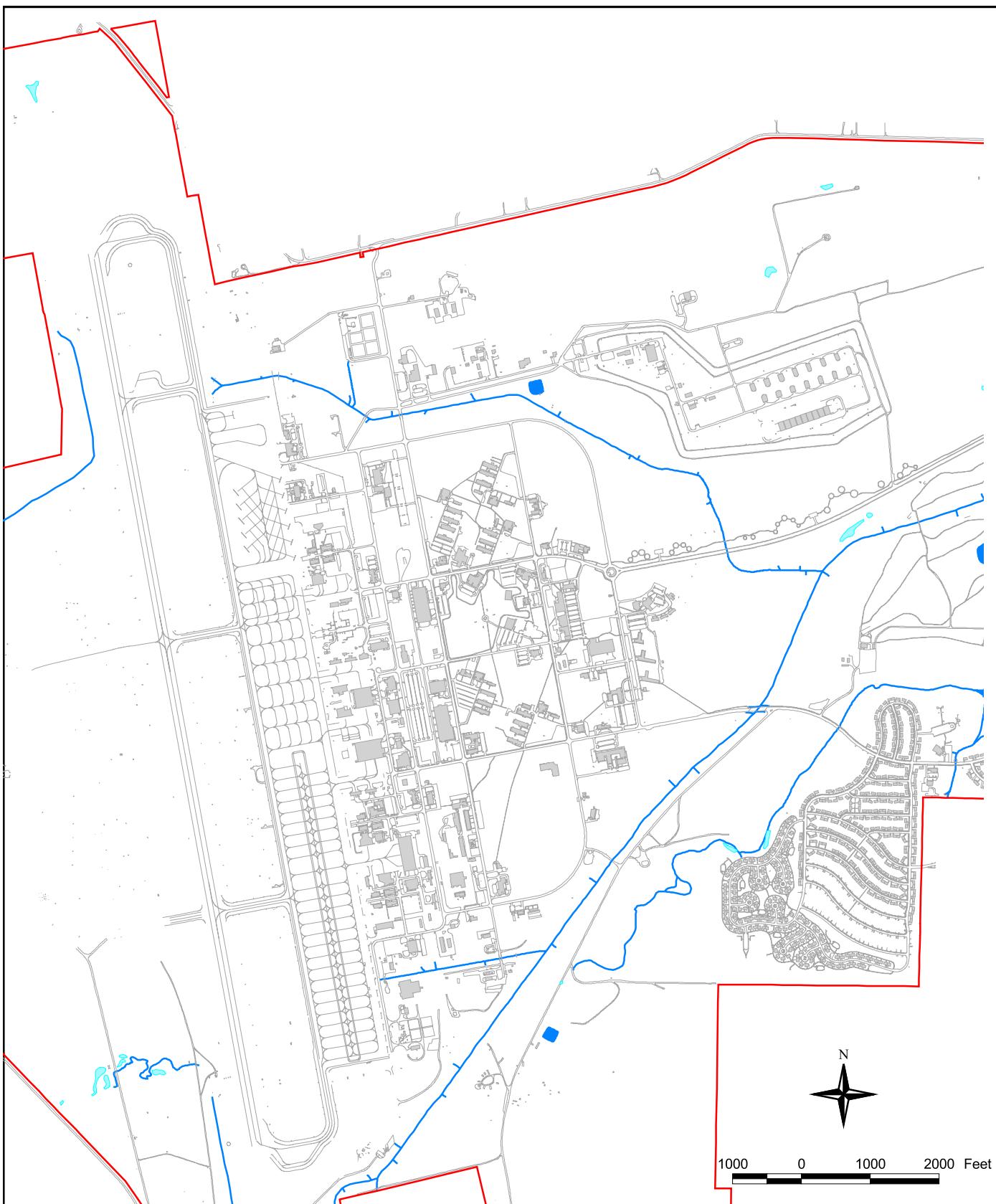
Legend

- | | |
|---------------|-----------------------|
| Base Boundary | Floodplain - 100 Year |
| Buildings | Creeks/Drainages |
| Pavements | Surface Water Bodies |

z:\Dyess_GIS\windo.apr [Fig 6]

FLOODPLAIN LOCATIONS WINDO ENVIRONMENTAL ASSESSMENT DYESS AIR FORCE BASE, TEXAS

DRN BY: JJZ	DATE: 02/04/05	PROJECT NO.	FIG NO.
CHK'D BY: BEO	REVISION:	16169816	6



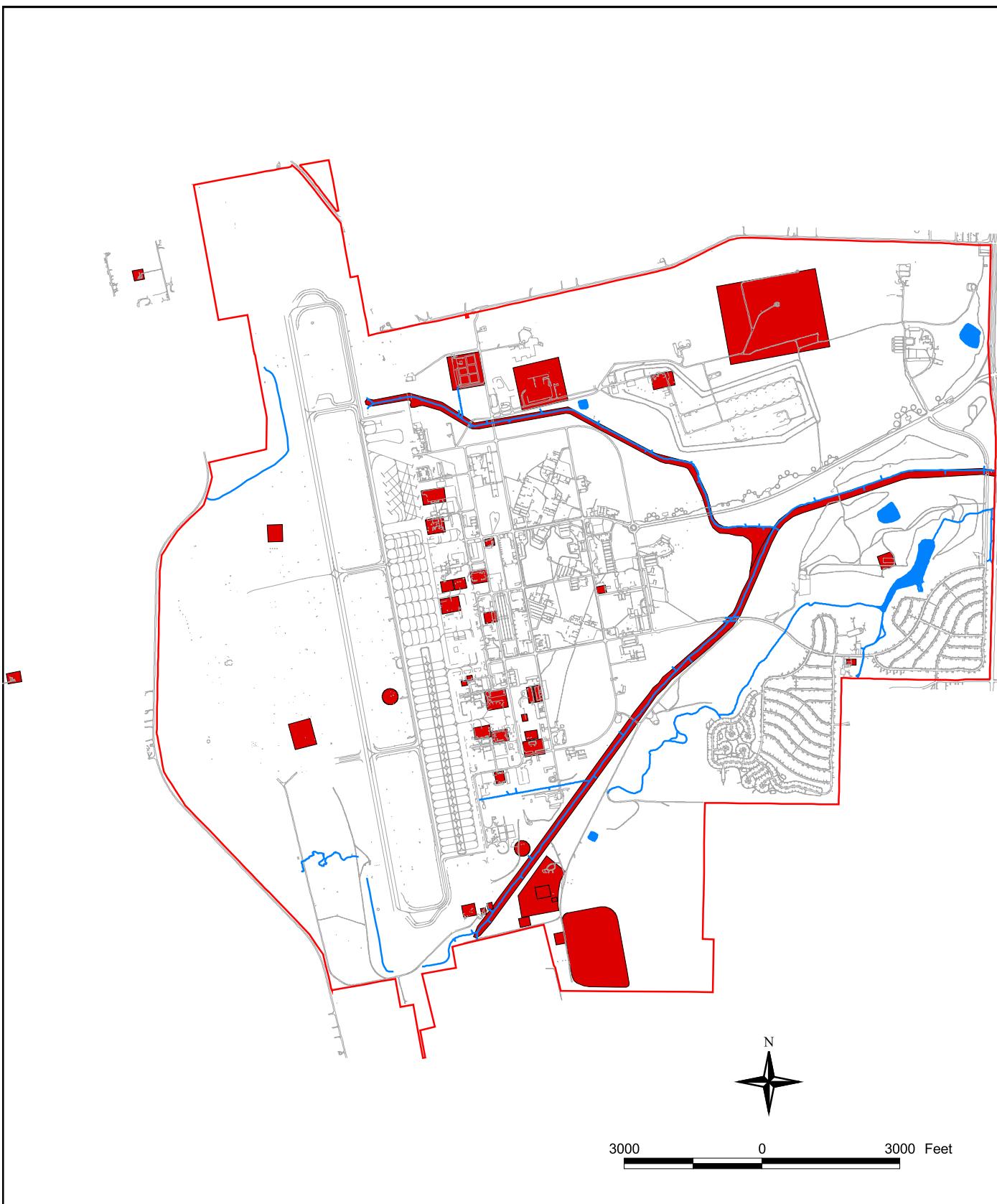
Legend

- | | |
|---|---|
| ■ Base Boundary | Wetlands |
| Buildings | \wedge Creeks/Drainages |
| \wedge Pavements | Surface Water Bodies |

z:\Dyess_GIS\windo.apr [Fig 7]

WETLAND LOCATIONS WINDO ENVIRONMENTAL ASSESSMENT DYESS AIR FORCE BASE, TEXAS

DRN BY: JJZ	DATE: 02/04/05	PROJECT NO.	FIG NO.
CHK'D BY: BEO	REVISION:	16169816	7



Legend

- | | |
|---------------|----------------------|
| Base Boundary | ERP Sites |
| Buildings | Creeks/Drainages |
| Pavements | Surface Water Bodies |

z:\Dyess_GIS\windo.apr [Fig 8]

ERP SITES WINDO ENVIRONMENTAL ASSESSMENT DYESS AIR FORCE BASE, TEXAS			
DRN BY:	DATE:	PROJECT NO.	FIG NO.
JJZ	02/04/05	16169816	8
CHK'D BY: BEO	REVISION:		

APPENDIX A

Wing Infrastructure Development Outlook

Dyess Air Force Base

Wing Infrastructure Development Outlook (WINDO)



CONTRACT

The following is the summary vision statement for Dyess AFB:

Preparing teams of airmen to provide bombing, airlift support, formal training, and combat support...delivering rapid, decisive, and sustainable airpower to combat commanders anytime, anywhere.

Implementation is through the Air Force's comprehensive planning process, which seeks to rationalize the process by which decisions concerning land use, infrastructure development, and project sitings are made.

This document presents plans that will be implemented to achieve this vision. Project lists for all major investment programs are included. Changes to installation vision or projects will be made in accordance with Wing Infrastructure Development Outlook (WINDO) guidance.

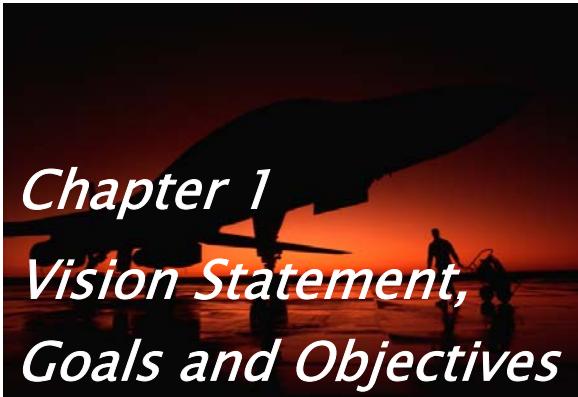


JONATHAN D. GEORGE, Colonel, USAF
Commander, 7th Bomb Wing

HAL M. HORNBURG
General, USAF
Commander

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4.1.13	Demolition Program
4.1.14	Communications Infostructure
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Chapter 1

Vision Statement, Goals and Objectives

1.1 7 BW Mission

The 7 BW develops and maintains operational capability for ACC's largest B-1 Wing, delivering global power to support combatant commander taskings for the joint and combined application of conventional airpower – produces combat-ready aircrews in the Air Force's only B-1 formal training unit – and provides operations, maintenance, and medical and mission support for the wing, the 317 AG and 13 associate units.

1.2 Installation Vision

The Dyess AFB Vision—“preparing teams of Airmen to provide bombing, airlift support, formal training, and combat support...delivering rapid, decisive, and sustainable airpower to combat commanders anytime, anywhere...”

The vision of Dyess AFB is implemented through the Air Force's comprehensive planning process, which seeks to rationalize the process by which decisions concerning land use, infrastructure development, and project sitings are made. The following goals reflect the installation comprehensive planning process:

- Direct and guide the long-range development of the base;
- Integrate interrelated functional programs derived from other component plans;
- Relate mission planning to policies, programs, and specific projects for installation facilities;
- Provide the basis for all decisions on siting of facilities and setting construction, repair, and renovation priorities; and

- Provide the basis for the preparation of the Dyess AFB Facility Development Plan.

1.3 Goals and Objectives

The overall goal of this planning effort is to provide a framework for programming, design and construction, and effective resource management that allows Dyess AFB to achieve its vision.

Following is a list of Facility Development Plan goals and objectives tied to the 7 BW Strategic Plan's goals.

Goal: Ensure accomplishment of the 7 BW and 317 AG missions to develop and maintain operational capability for the B-1 fleet to deliver global power to theater commanders, and for the C-130 fleet to provide global airlift services.

Objectives:

- Provide facilities which enhance the 7 BW and 317 AG operational capabilities.
- Relate mission planning to policies, programs, and specific projects for facilities and systems.

Goal: Take care of and recognize base personnel by promoting public health, safety, and overall quality of life.

Objectives:

- Promote a visually pleasing base through the implementation of architectural compatibility and landscape development;
- Continue Military Family Housing (MFH) modernization and improvement efforts; and
- Continue a systematic program to remove obstructions from the airfield environment.

Goal: Ensure that facilities and land uses are adaptable to and can expand to accommodate new missions, weapons systems, and training.

Objectives:

- Furnish quality facilities for personnel to live and work in; and
- Continue to modernize the installation so that essential facilities and services are

available to carry out bombing and airlift/airdrop missions.

Goal: Provide for the force protection of the airfield and operational and control elements of the base.

Objectives:

- Implement flight-line access measures;
- Enhance MFH access control measures;
- Improve security at installation access points (Tye and Main Gates); and
- Implement appropriate design features (walls, setbacks, etc.).

Goal: Ensure on-base land use and airspace is compatible with off-base communities, and maintain a close working relationship with local governments to ensure off-base development does not encroach upon the base.

Objectives:

- Continue cooperative land use partnerships with local governments; and
- Adhere to airfield clearance criteria when siting facilities.

Goal: Encourage an on-base development pattern which minimizes land use conflicts, consolidates like activities, and contributes to energy conservation and the efficient use of personnel and materials.

Objectives:

- Promote grouping of compatible activities and organizations;
- Reduce the number of facilities to only those required;
- Site new facilities to optimize organizational functional relationships; and
- Shed excess infrastructure through facility demolition, pickling, and leveraging under capacity through privatization, outsourcing, and other innovative partnerships.

Goal: Develop the best environmental program to ensure effective cleanup, compliance, and prevention, and partner with our neighbors to create community-enhancing programs.

Objectives:

- Continue Environmental Restoration Program (ERP) activities to cost-effectively reduce risks to human health and environment by having remedial systems in place as per established milestones; and
- Actively manage the protection of the installation's cultural and natural resources.
- Implement planning, siting and design standards to minimize potential for adverse environmental impact.

Chapter 2

Existing Conditions and Analysis

2.1 Facilities

Facilities at the base consist of a main runway, two assault landing zones, associated taxiways and parking aprons, administrative areas, industrial facilities, dormitories and housing areas, recreational facilities, and open space. Dyess is also responsible for the remotely located Tennyson Drop Zone and 10 RBTI emitter sites in West Texas with associated scoring sites at Pecos and Snyder.

Dyess AFB is a relatively compact installation with moderate amounts of open land. Some of its land area cannot be developed due to safety and environmental constraints. The tendency for new construction will be to build consolidated, multi-use facilities that contain mixed-use activities when appropriate.

Dyess AFB has 3,135,520 square feet of space in 335 buildings. There are over 1,000 on-base military family housing units and 402 off-base housing units in Quail Hollow.

2.2 Infrastructure

The following is a general synopsis of the existing infrastructure and utility systems at Dyess AFB. 2.2.1 Water Supply and Distribution System

2.2.1.1 Existing Conditions

Water Supply

The water supply for Dyess AFB is provided by the Abilene Water Department, which relies on surface water from Lake Abilene, Kirby Lake, Fort Phantom Lake, Hubbard Creek Reservoir, and Lake Iive. The Abilene Water Department utilizes three water treatment plants. These



plants include the Abilene Water Treatment Plant, the Grimes Water Treatment Plant, and the Northeast Water Treatment Plant.

Post-Treatment Facilities

There are two post-treatment plants located on base, one in Building 8215 and a backup in Building 9199. These plants serve to boost treatment chemicals to meet federal water quality standards. This treated water is then distributed throughout the base to supply both domestic and fire protection demands. The water is tested daily for free and total chlorine, pH, hardness, phosphates, and fluoride.

In addition to potable water, Dyess also receives treated effluent water from the city of Abilene. This water is stored in two 11 million gallon surface reservoirs on base, and used for irrigation of the golf course, air park, and other irrigation needs.

Water Distribution System

Two supply lines connect the base to the Abilene Water Department potable water supply. A 12-inch distribution pipe enters the base near the Medical Treatment Facility and reduces to an 8-inch C-900 pipe before entering the treatment plant at Building 9199. A 16-inch supply line from the City of Abilene enters the base through the family housing area and reduces to a 12-inch C-900 pipe before entering the treatment plant at Building 8215. Both City of Abilene supply lines are in good condition.



There are two water meters on base, one on each supply line. There are three water supply tanks on base, including a 25,000-gallon clear well tank, a 600,000 gallon ground storage tank, and a 500,000 gallon elevated storage tank. There are five distribution pumps in the base distribution system, three pumps are housed at Building 8215 and two are housed at Building 9199. All tanks are considered to be in good condition.

Water distribution lines on base range from 1 ½ -inch to 16-inches in size and from new to 45 years in age. Numerous older gate valves are now inoperative, and the conditions of the original lines are greatly deteriorated, making main breaks more and more frequent. Another deficiency in the distribution system is that the main serving the munitions storage area is undersized for fire protection flow and pressure criteria. The distribution system is looped, but there are approximately 20 dead end lines that require monthly flushing to control bacteriological growth.

Most air valves are in good shape. There are some pressure problems in the family housing

areas during peak usage times. This problem should be mitigated by utility upgrades included in the Housing replacement MILCON program. An additional problem is that the major soil type on Dyess AFB is clay with high shrink-swell characteristics, which causes shear breaks in water lines. The first phase of replacing the existing rigid cast iron and asbestos cement pipes with resilient plastic is currently in progress.

2.2.1.2 Assessment

The water supply and treatment system capacities are adequate to meet both current and potential future water demands of the base. However, until the aging distribution lines and valves are fully replaced, the distribution system should not be considered adequate to meet potential future water distribution needs of the base.

2.2.2 Sanitary Sewer System

2.2.2.1 Existing Conditions

The 45 year old sanitary sewage collection system on Dyess AFB is currently being replaced. The original concrete and vitrified clay pipe is being replaced with resilient plastic by pipe busting and CIPP lining. The on-base collection system is divided into seven sub-basins. The general direction of flow follows the topography, which falls from west to east across the base. The combined flow from all the sub-basins is conveyed by a 21-inch vitrified clay pipe from the base toward the Hamby Wastewater Treatment Plant in Hamby, Texas. No septic tanks are currently located on the base.

The City of Abilene collection system accepts the inflow from Dyess AFB through one 21-inch vitrified clay pipe at the eastern edge of the base. The Hamby Wastewater Treatment Plant is an activated sludge facility that discharges treated effluent to Possum Kingdom Lake. The plant operates at approximately 65 percent of capacity. The maximum daily peak recorded is 82 percent of capacity.

2.2.2.2 Assessment

The overall collection system is poor, exhibiting high infiltration and inflow (I/I) rates in the old vitrified clay pipes. Three projects are in progress to replace all sewer mains on base.

When the replacement projects are completed, the collection system will be in excellent condition with the exception of the lift stations. The on-base collection system utilizes gravity flow, assisted by 10 sanitary sewer lift stations. Most of these lift stations are modified manholes, built with the original collection system and require constant maintenance. They no longer meet current code, lacking both backup power supply and alarm components. A program is under development to replace lift stations, but is currently unfunded.

2.2.3 Stormwater Collection System



2.2.3.1 Existing Conditions

The stormwater collection system on Dyess AFB consists of both storm sewers and open ditches. Storm sewers serve almost all of the developed areas on base. Roadside ditches provide conveyance for stormwater along some of the roads that are not in heavily populated areas, such as Arnold Boulevard along Dyess Air Park.

The storm sewers and collection ditches all drain to one of the two main conveyance channels on the base, referred to as the north diversion ditch and the south diversion ditch. The direction of flow is generally west to east across the base. A

ridge runs roughly east-west through the center of base, dividing the base into two main drainage areas.

There is a large retention pond by the family housing area, referred to as Lake Totten. Overflow from Lake Totten drains over the spillway and continues downstream in the original tributary to Little Elm Creek to join the south diversion ditch. The two diversion ditches continue through the length of the base and have outfalls at the eastern boundary, combining into Little Elm Creek just east of the base and eventually discharging into Elm Creek.

Containment dams are located in the north and south diversion ditches just east of the airfield as part of a control system to prevent chemical spills from entering the stormwater collection system. Contaminated water detained upstream of the dams can be pumped to containment lagoons and drained to the sanitary system if necessary. These containment lagoons can also be used for stormwater storage during large rainfall events to alleviate flooding downstream.

The two areas of POL storage tanks on the airfield are protected by concrete containment dikes. Following a rain event or spill and subsequent contamination, the water is discharged to the storm drain system once any visible sheen has been removed from the water.

2.2.3.2 Assessment

Overall, the stormwater collection system is adequate to meet existing and future demands. No significant flooding problems have occurred on the base, and the only concern is the continuing deterioration of the pipes due to their age.

2.2.4 Electrical Distribution System

2.2.4.1 Existing Conditions

Electrical power for Dyess AFB is supplied solely by contract with AEP-West Texas Utilities Company (WTU). Some facilities have back-up generators. Two transmission lines enter the base directly from WTU, and an additional

emergency interconnect feeds directly into the Medical Treatment Facility.

There are three substations on the base, all maintained by WTU. Power usage is metered at



the substations. Pad mounted transformers are installed in the new family housing areas. Pole mounted transformers were installed in the older family housing and other base areas. The distribution system is looped, with approximately 26 percent of the primary and 53 percent of the secondary lines underground. The remaining lines are overhead, many on poles more than forty years old. Cross-arm and pole replacement is a pressing need for the electrical distribution system.

2.2.4.2 Assessment

The substations are operating at 30-40 percent of capacity, and are adequate to meet both the current and future power demands of the base. Energy efficiency improvements made in recent years reduced demand, freeing up more capacity for future expansion. The majority of the distribution lines are overhead and deteriorated. A program is in place to replace many of these lines to underground.

2.2.5 Natural Gas Distribution System

2.2.5.1 Existing Conditions

The heating source on Dyess AFB is natural gas, which is supplied by TXU Electric & Gas by two transmission lines. One transmission line

feeds the eastern base area and the second line feeds the western base area. Shutoff valves between the eastern and western systems provide the capability to back feed from either side if necessary. The gas service is non-interruptible. Gas consumption is metered at the two reducing stations.

2.2.5.2 Assessment

The distribution system was first constructed approximately 45 years ago. It is currently exempt from privatization. Most valves are deteriorated and inoperable, making it difficult to isolate breaks. An ongoing valve replacement project will greatly enhance distribution system repairs with minimal impact to adjacent facilities. The natural gas supply and distribution system has adequate capacity for existing and foreseeable future demands.

2.2.6 Liquid Fuels

2.2.6.1 Existing Conditions

The liquid fuel utilized at Dyess AFB is JP-8 fuel, supplied via two pipelines from the FINA refinery and the Pride refinery. Fuel is stored in five bulk storage tanks, four 20,000BL and one 12,500BL, near the Tye Gate and distributed through buried lines to four 10,000BL operating storage tanks located at the south end of the aircraft parking apron. These tanks were built in the mid-1950s but are in good condition. There is a project in progress to replace geodesic dome tank roofs with steel cone roofs. The concrete containment dikes surrounding the storage tank areas are in good condition. The pumps in the liquid fuel distribution system on base are all less than fifteen years old and in



good condition.

In addition to the bulk storage tank and operating storage tank areas, there are four other POL areas on base: the base service station, the AAFES, service station and two aerospace ground equipment service stations. Fuels are transported by truck to these locations. AAFES has established a project to replace their service station with a new facility in FY 05.

2.2.6.2 Assessment

The capacity of the existing liquid fuel supply and distribution system is adequate to meet both current and anticipated future needs.

2.2.7 Communications System

Dyess AFB is developing a Communications and Information (CI) Systems Blueprint that defines existing CI systems, shortfalls, planned improvements to the system and transitional and implementation plans. To achieve mission accomplishment in the future, the base must continue to promote and implement communications systems, which will leverage the capabilities of Dyess AFB's personnel. The CI Systems Blueprint should be continually modified and amended to best represent the condition of the communications system while addressing its changing needs.

2.2.7.1 Information Transfer System

The existing condition of the base manhole and duct system is good. All new cables are installed in a manhole and duct system. The copper cable plant is foam skin, filled core telephone cable. There are five telephone remote switches that cover the base for digital capabilities. The fiber optic cable plant is in very good condition. Connectivity to 98% of base facilities is provided through fiber optic medium at gigabit speeds. The inside cable plant infrastructure consists primarily of user-installed Category 5 Unshielded Twisted Pair (UTP) cable. Specialized applications in some facilities utilize fiber optic cable.

2.2.7.2 Telephone Switching System

The Dial Central Office (DCO) switch is an AT&T Definity GCS G3R. The current DCO switch is Integrated Services Digital Network (ISDN) capable.

The CI Systems Blueprint outlines a plan to upgrade or replace the existing key systems with digital capabilities throughout the base.

2.2.7.3 Data Communications

Accessibility and security of classified and unclassified data systems are essential to operations of the 7 BW and tenant units. The Air Force has adopted the Theater Battle Management Core System Unit Level (TBMCS UL) as the premier command and control asset to coordinate multiple base functions providing base leadership a near real-time full-spectrum operational picture. As specified in the CI Systems Blueprint, upgrades to the Dyess classified network will be key to the successful implementation of TBMCS-UL. Dyess has begun implementation of TBMCS UL and is projected to have base-wide operational capability by 2005.



Network Control Center (NCC) servers and associated networking equipment provide core network services and prevent unauthorized users from obtaining access to critical information. The Base Information Protection

(BIP) Firewall system was upgraded in FY03 and greatly improved BIP capability to handle increased bandwidth and data flow resultant from continuously increasing IT demands. Upgrade to the BIP was a key element in implementation of Air Force NOSC centric operations that will facilitate MAJCOM centralized management of base-level network resources.

2.2.7.4 Long Haul Communications

Long haul communications systems on Dyess AFB interconnect the voice and data systems with the wide area voice and data networks provided by the Defense Investigative Services Agency (DISA) and ACC. The condition of these systems will be addressed in future revisions to the C-I Systems Blueprint.

2.2.7.5 Radio Systems

The radio systems consist of Land Mobile Radio (LMR) networks, very high frequency (VHF), ultrahigh frequency (UHF) radios, and high frequency (HF) radios. These systems, which are vital for tactical control of aircraft, are all in very good to excellent condition.

2.2.7.6 Meteorological and Navigational Systems

The two main elements of the Flight Support Systems are the air traffic control and landing systems and the meteorological systems. The components of these systems are the Tactical Air Navigation (TACAN) beacon, the Solid State Instrument Landing System (SSILS), and Mobile Microwave Landing System (MMLS) equipment.



The TACAN and SSILS are in very good to excellent condition. The MMLS is still awaiting a permanent structure, but has passed flight check. The meteorological sensors are all in excellent condition as well. These systems are adequate for both existing and future conditions.

Dyess AFB maintains a WSR 88-D (NEXRAD) for the National Weather Service. It is located in Moran, Texas and is in good to excellent condition. This system is adequate for both existing and future conditions.

2.2.7.7 Video Surveillance System

Dyess AFB has an inadequate video surveillance system. However, in FY2004 we are installing new camera capabilities at 3 base gates, Deployment Control Center, water tower, and flight line. This capability is expected to change our condition to excellent.

2.2.7.5 Video Teleconferencing

Dyess AFB has a non-classified video teleconferencing system that is in excellent condition.

2.2.8 Airfield Pavements

2.2.8.1 Existing Conditions

Airfield pavements consist of the following major assets:

- Primary runway;
- One paved assault landing zone (ALZ);
- One unpaved assault landing zone (ALZ);
- Four maintenance aprons;
- 9 million square-foot parking apron;
- Two run-up pads; and.
- Eight taxiways.

The aircraft parking apron can accommodate 71 B-1 and 35 C-130 aircraft in addition to the transient parking area. There is adequate airfield capacity available for expansion of the current missions or beddown of a new mission.

2.2.8.2 Assessment

An airfield pavement condition survey was performed in September of 2000. This survey resulted in an Engineering Assessment (EA) rating of "Degraded" for the runways, aprons, taxiways, and overruns, as well as an overall rating of "Degraded" for the airfield. The survey recommends major pavement improvements to achieve pavement condition index (PCI) ratings of at or above critical, and multiple projects for stop-gap and preventative actions only.

Maintenance and repair efforts since then have basically maintained status quo. Additional improvements are needed to continue to maintain adequate conditions to carry out the base's mission.



2.3. Existing Land Use

2.3.1 Installation

Existing land use patterns are a result of the runway configuration and subsequent development surge in the 1950s. Additional facility development and supporting infrastructure have evolved over time as missions and requirements have changed or expanded. Each existing land use classification is established based on the predominant facility type within that geographic area.

Dyess AFB Existing Land Use is summarized in Table 2.1, and shown in the Existing Land use plan, Figure 2.1.

Table 2.1 Existing Land Use Summary

Category	Acres
Airfield	856
Aircraft Ops & Maintenance	313
Industrial	469
Administrative	85
Community (commercial/service)	127
Medical	20
Housing (Accompanied)	268
Housing (Unaccompanied)	65
Outdoor Recreation	510
Open Space	2,687

Source: Parsons 2003

Figure 2.1
Existing Land Use



2.4 Composite Constraints and Opportunities

This component addresses and summarizes all of the natural and man-made factors affecting development at Dyess AFB. Some *constraints*, such as jurisdictional wetlands, hazardous waste storage sites, airfield criteria, noise areas, force protection, flood plains, or explosive safety zones, can greatly influence the future use of Air Force real property. Alternatively, some conditions that represent constraints to some types of development may provide *opportunities* to other types of development.

It is DoD policy to protect and conserve the natural and cultural resources for which it is responsible and to maintain the quality of land,

air and water to protect human and environmental health. Dyess AFB provides planned and coordinated management for development, improvement, maintenance, and conservation of the base's resources in keeping with the accomplishment of the assigned mission. This effort and the military mission are not mutually exclusive. Therefore, all current and planned development activities, including master planning, construction and site approval requests, and training exercise plans, must consider the intent of DoD and base policies on the protection of natural and cultural resources and environmental quality.

The following sections will provide an assessment of these resources as they occur at the base. The assessment is the basis for evaluating potential effects to the environment and the extent to which future development at the installation may be constrained by natural and cultural resources and environmental quality. Table 2.2 and the Composite Constraints and Opportunities Plan at Figure 2.2 provide summary information from this section.

Table 2.2 Development Constraints Summary

Section	Description	Development
Natural and Cultural Resources		
Historic and Archeological Sites		Low
Threatened and Endangered Species		Low
Wetlands and Floodplains		Moderate
Lakes, Rivers, and Streams		Low
Geology and Soils		Moderate
Topography and Physiography		Low
Vegetation		Low
Forests		Low
Agricultural Outleasing		Low
Fish and Wildlife		Low
Bird Aircraft Strike Hazard (BASH)		Moderate
Pest Management		Low
Outdoor Recreation Areas		Low
Climate and Weather		Low
Environmental Quality		
Waste Generation and Hazardous Waste Accumulation Locations		Low
Solid Waste Disposal and Recycling Points		Moderate
Fuel Storage Tanks		Low

Table 2.2 Development Constraints Summary

Section	Description	Development
ERP		Moderate
Air Emission Sources and Inventory		Low
Wastewater Point Source Discharges		Low
Stormwater Non-Point Source Discharges		Low
Drinking Water Supply Sources and Monitoring Sites		Low
Toxic Substances Control Act		Moderate
Operational and Safety Constraints		
Airfield Clearance		Moderate
Explosive Safety Zones		Moderate
Noise		Moderate

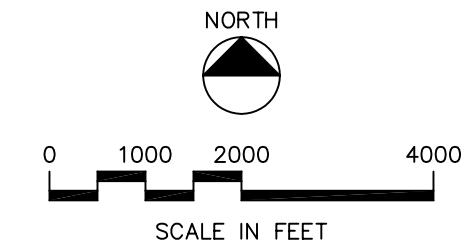
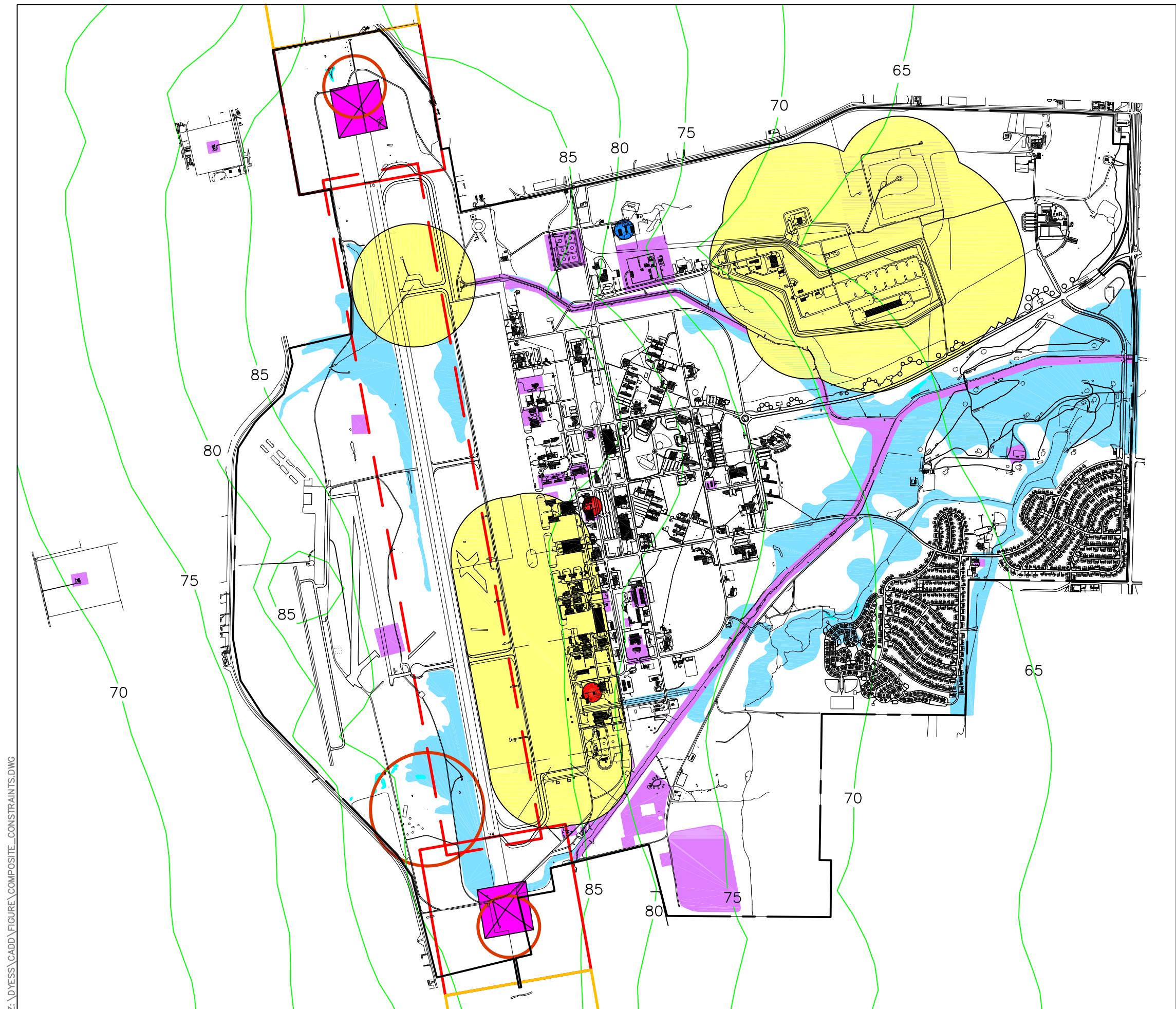
Low: Presents a *minimal* constraint to development for Dyess AFB

Moderate: Presents a *moderate* constraint to development for Dyess AFB

High: Presents a *significant* constraint to development for Dyess AFB

Source: Parsons 2003

Figure 2.2
Composite
Constraints &
Opportunities



Chapter 3

Investment Strategy

3.1 Future Development Issues

The following development issues encompass the most significant future development needs at Dyess AFB.

- Redevelopment of the community center;
- Replacement of 697 housing units built in the 1950s;
- Mission expansion along the northern flight line;
- In-fill development along the flight line to modernize aircraft operations;
- Airfield repair/upgrade;
- Force protection upgrades; and
- Consolidation and modernization of several 7 MSG squadrons (7 CES, 7 CS, 7 MSS, and 7 SFS).

3.2 Major Investment Strategies

The 7BW investment strategy strives to maintain both current and future mission capability while also enhancing the quality of life environment for personnel living and working on Dyess Air Force Base. Toward these ends, the following priority categories are used to apportion facility investment dollars.

3.2.1 Direct Mission Support

The first investment priority is maintenance and repair of direct mission support facilities, including FIM Critical projects for:

- Airfield infrastructure
- Operations and training facilities
- Strategic mobility assets

- Mission essential maintenance facilities

3.2.2 Infrastructure

Infrastructure maintenance and repair is the second priority. Projects in this category assure long term continuity for both current and future missions, and are directed primarily at the following:

- Utilities
- Pavements
- Structural integrity (roofs, foundations & exterior enclosures)

3.2.3 Quality of Life

The third priority is to continually enhance the quality of life environment on Dyess Air Force Base. Dormitory residents are of particular concern, but this category also includes the working environment for all personnel. Projects include:

- Dormitory infrastructure upgrades to electrical and HVAC systems
- Dormitory furnishings and finishes upgrades
- Workspace alteration and consolidation to enhance working environments
- Maintenance and upgrade of recreational and leisure time facilities
- Refurbishing interior finishes
- Landscaping

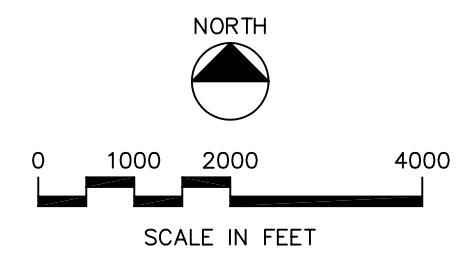
3.3 Future Land Use

In order to realize the Dyess AFB vision, land use patterns must progress into a well-designed layout that provides functional efficiency, maximum quality of life, and aesthetic quality, while reserving available developable land for mission growth. The Future Land Use Plan (Fig 3.1) strongly resembles the base's existing land use patterns. Minor modifications have been made to enhance functional efficiency and compatibility.

Figure 3.1
Future Land Use



- Installation Boundary
- Brown Airfield
- Teal Aircraft Operations & Maintenance
- Grey Industrial
- Orange Administrative
- Red Community
- Purple Medical
- Yellow Housing (Accompanied)
- Light Yellow Housing (Unaccompanied)
- Green Outdoor Recreation
- Light Green Open Space



Chapter 4

Future Investment and Project Locations

4.1 Project Lists and Sitings

Sections 4.1.1 – 4.1.12 present a listing of unfunded requirements in each program. Major projects are shown on the Capitol Improvements Key Projects Map, Figure 4.1

4.1.1 Sustainment, Restoration & Modernization by Contract (SRMC) Program

SRMC Project List

PROJECT #	PROJECT TITLE	PA (\$K)	COMM (\$K)	REMARKS
FNWZ 03-0045	Rpr 7Og HQ 8030	200.0	150.0	FY 04/05 Straddle Bid
FNWZ 99-0058	Rpr IMF Roof 9112	195.4		FY 04/05 Straddle Bid
FNWZ 99-0056	Rpl Roof 8130	180.0	65.0	FY 04/05 Straddle Bid
FNWZ 04-0042	Urgent RW Repairs	500.0		FY 04/05 Straddle Bid
FNWZ 99-0050	Rpr Base Pool 7109	1,328.0		FY 04/05 Straddle Bid
FNWZ 02-0064	Rpr Dorm HVAC 6113	815.0	8.0	FY 04/05 Straddle Bid
FNWZ 02-0065	Rpr Dorm HVAC 6114	815.0	8.0	FY 04/05 Straddle Bid
FNWZ 02-0066	Rpr VOQ HVAC 6135	815.0	5.0	FY 04/05 Straddle Bid
FNWZ 92-0028	Renovate DV Quarters 7420	250.0	75.0	FY 04/05 Straddle Bid
FNWZ 04-0050	Demo C-130 Parts Store 4318	90.0	100.0	FY 04/05 Straddle Bid
FNWZ 05-0028	Rpl TW A Slabs	700.0		FY 04/05 Straddle Bid
FNWZ 98-0096P2	Rpl Gas Valves	458.0		FY 04/05 Straddle Bid
FNWZ 02-1105	Postal Center	196.0		BX Master Plan Must Pay
FNWZ 02-1111	Demo Burger King	56.0	150.0	BX Master Plan Must Pay
FNWZ 02-1109	Demo Bank/PO/BX	966.0	150.0	BX Master Plan Must Pay
FNWZ 04-0092	Rpl CASS 400HZ Circuits	1,000.0		
FNWZ 04-0059	Relocate Hangar Door Switches	180.0		
FNWZ 00-0038P1	Install Fall Protection 5110	1,120.0		RTA
FNWZ 00-0038P2	Install Fall Protection (4 Hangars)	1,366.0		RTA
FNWZ 98-0104	Mtn Cathodic Prot Sys 5162	85.0		65% Dsgn Compl
FNWZ 00-0085	Rpl Afld Emerg Gen 3010/3202	50.0		Afld Obstruction
FNWZ 97-0029P2	Rpr Ctl Twr Leaks, 4300, Ph2	300.0		Dsgn In-Progress
FNWZ 05-0027	Rpr Mobility Staging Pavements	1,000.0		
FNWZ 04-0030	Recoat Interior Grnd Water Tank	80.0		
FNWZ 05-0029	Rpr TW E @TWA	150.0		
FNWZ 04-0032	Rpr CEX/EOD Fac 7007	136.7	135.0	
FNWZ 04-0058	Install HAZMAT HVAC 7010	174.8		65% Dsgn Compl
FNWZ 87-0046A/B	Rpr/Altr Base Theater	1,300.0	125.0	
FNWZ 98-0109	Rpl Roof, Mtn Spt Shp, 4309	1,122.0		RTA
FNWZ 96-0012	Replace Elec Dist Sys, Ph D	1,960.0		75% Dsgn Compl

FNWZ 00-0007	Repair A/C Mtn Shop 8130	940.7		RTA
FNWZ 05-0030	Seal Apron Jts/Cracks B-1 North	2,000.0		
FNWZ 99-0013	Repair 7MSS HVAC, 7232/3	1,810.0		RTA
FNWZ 01-0016	Rpl Roof 7007	150.0		
FNWZ 02-0063	Rpr 317AG HQ Parking	350.0		RTE
FNWZ 99-0030	Rpl Hangar Roof 4314	350.0		
FNWZ 98-0116	Rpl Water Mains	2,500.0		
FNWZ 00-0122	Rpl VOQ Windows	150.0		
FNWZ 95-0095	Replace Elec Dist Sys, Ph C	967.9		75% Dsgn Compl
FNWZ 98-0094	Replace Roof, Bldg 4311	1,646.0		RTA
FNWZ 92-0055	Rpl Halon FP Systems	250.0		
FNWZ 04-0002	Rpr Ave C	450.0		
FNWZ 05-0031	Renovate DV Quarters 7421	250.0	75.0	
FNWZ 04-0041	Rpr 2nd St	575.0		
FNWZ 99-0080	Replace Flightline Fence	365.0		RTE
FNWZ 99-0009	Rpr VOQ/VAQ HVAC	900.0		
FNWZ 94-0020	Rpl Bowling Alley Roof	290.0		
FNWZ 98-0029	Rpr VOQ 7405	1,500.0	350.0	
FNWZ 95-0032	Rpr/Alter VOQ, 7407	1,411.0	425.0	
FNWZ 05-0032	Renovate DV Quarters 7422	250.0	75.0	
FNWZ 96-0026	Provide ADA Access, 7316	289.5	85.0	RTA
FNWZ 99-0027	Rpr VOQ 7409	1,500.0	425.0	
FNWZ 04-0106	Install Bird Netting 5020	952.3		
FNWZ 05-0035	Munitions Covered Stor Bldg	500.0	180.0	
FNWZ 05-0034	Munitions Assembly Pad	575.0	145.0	
FNWZ 04-0056	Rpr Tye LZ Surface	250.0		
FNWZ 03-0078	Rpr TW H	1,600.0		
FNWZ 04-0053	Add RW 16/34A Overt/Covert Ltg	380.0		
FNWZ 04-0054	Add RW 16/34B Overt/Covert Ltg	670.0		
FNWZ 02-0063	Rpr 317AG HQ Parking	350.0		RTE
FNWZ 02-0097	Resurface Engine Shop Fl 4311	60.0		
FNWZ 04-0093	Rpl Carpet 6112	77.8		
FNWZ 04-0094	Rpl Carpet 6127	77.3		
FNWZ 04-0101	Rpl Carpet 8202	35.2		
FNWZ 04-0105	Rpl Flooring 9223	19.7		
FNWZ 04-0103	Rpl Carpet 2nd Fl 7040	14.9		
FNWZ 04-0102	Rpl Carpet 1st Fl 4120	99.0		
FNWZ 03-0069	Rpl Carpet 7405	48.7		
FNWZ 03-0068	Rpl Carpet 9030	26.2		
FNWZ 04-0100	Rpl Carpet 7238	23.6		
FNWZ 04-0099	Rpl Carpet 9329	6.2		
FNWZ 04-0098	Rpl Carpet 9198	42.6		
FNWZ 02-0117	Rpl Carpet 7004	5.1		
FNWZ 04-0101	Rpl Carpet 8202	1.6		
FNWZ 02-0128	Rpl Carpet 9109	5.9		
FNWZ 03-0043	Rpr 28BS latrines	155.6		
FNWZ 02-0098	Install Visitor Center Fire Alarm	13.4		
FNWZ 02-0033	Resurface Base Tennis Courts	120.0		
FNWZ 02-0037	Const Heritage Pool Gazebo	50.0		

FNWZ 95-0137	Cons Dorm Tennis Courts	150.0		
FNWZ 99-0025	Rpl Picnic Lat Stone Finish	22.2		
FNWZ 99-0078	Expand RV Storage Area	66.9		
FNWZ 88-0031	Cons Chapel Parking 6220	110.0		
FNWZ 94-0021	Construct Rec Field	290.0		
FNWZ 00-0126	Inst Dorm Rec Area Lighting	250.0		
FNWZ 00-0041	Inst Break Room Sink, 5110	45.0		
FNWZ 00-0073	Cons Dorm Volleyball Courts	25.0		
FNWZ 04-0108	Cons CAC Gazebo	30.0		
FNWZ 05-0038	Alter Fitness Ctr, 7104	300.0		
FNWZ 98-0035	Rpr NCC HVAC, 7320	383.3		95% Dsn

4.1.2 ACC Military Construction (MILCON)

ACC MILCON Project List

MAP ID	PROJECT #	PROJECT TITLE	PA (\$K)	COMM (\$K)	REMARKS
A1	FNWZ 01-3006	Fire Station	11,000.0	120.0	Demo 1,865 SM
A2	FNWZ 99-3004	Refuel Veh Maint.	3,500.0	50.0	Demo 787 SM
A3	FNWZ 05-3002	Consolidated Support Fac	13,400.0	600.0	Demo 6,184 SM
A4	FNWZ 04-3006	Repair RW Asphalt Edges	11,800.0		
A5	FNWZ 06-3005	Consolidated Fab Flt Shop	6,600.0	500.0	
A6	FNWZ 03-3001	Repair 4-Bay Hangar 5020	11,000.0	300.0	
A7	FNWZ 03-3007	Repair 2-Bay Hangar 4314	8,300.0	250.0	
A8	FNWZ 05-3010	Replace Elec Dist Sys	3,000.0		
A9	FNWZ 05-3003	Rpr Fire Det/Supr Sys	4,000.0		
A10	FNWZ 05-3011	Replace Water Mains	18,000.0		
A11	FNWZ 05-3014	Storage Igloos	12,000.0	350.0	
A12	FNWZ 05-3012	Repair RW Concrete Keel	10,000.0		
A13	FNWZ 06-3007	Replace Gas Mains	8,000.0		
A14	FNWZ 05-3013	Repair Base Streets	7,000.0		
A15	FNWZ 03-3002	BCE Complex	16,900.0	600.0	
A16	FNWZ 03-3000	Longitudinal Grading	6,000.0		Afld Obstruction
A17	FNWZ 03-3004	Library/Education Center	9,300.0	75.0	Incl Religious Ed
A18	FNWZ 00-0105	Hazard Cargo Pad	10,200.0		Afld Obstruction
A19	FNWZ 04-3005	FL Arcft Parts Store	11,200.0	55.0	
A20	02-3006	ADAL B-1B ERRC	8,200.0	65.0	

4.1.3 AMC Military Construction (MILCON)

AMC MILCON Project List

MAP ID	PROJECT #	PROJECT TITLE	PA (\$K)	COMM (\$K)	REMARKS
B1	FNWZ05-3007	C-130 Multipurpose Maint Hangar	16,000.0	400.0	Demo 8265 SF
B2	FNWZ06-3006	317 AG Group Headquarters	5,800.0	300.0	Demo 13,548 SF
B3	FNWZ08-3001	C-130 3-Bay Maint Hangar	21,000.0	150.0	Demo 16,350 SF

4.1.4 Housing O&M

Housing O&M Project List

PROJECT #	PROJECT TITLE	PA (\$K)	COMM (\$K)	REMARKS
FNWZ 03-0060	Rpl 4-BR HWH	35.0		
FNWZ 04-0091	Rpl Digital Setback T'Stats	34.6		
FNWZ 02-0137P2	Rpl Kit/Dinning/Bath Floor	345.0		
FNWZ 04-0036	Install Mech Rm Floor Drains	80.0		
FNWZ 04-0043	Rpl Mech Rm Doors	90.0		
FNWZ 04-0037	Install GFI Outlets	35.0		
FNWZ 03-0061	Hardwire CO Detectors	85.0		
FNWZ 04-0038	Rpl Main Elec Service panel	175.0		
FNWZ 04-0088	Cons Trash Can Screens	68.8		
FNWZ 04-0089	Rpl Carpet, 20 Units	24.0		
FNWZ 04-0090	Rpl Tile, Kit/dining/bath, 30un	39.0		

4.1.5 Housing MILCON

Housing MILCON Project List

MAP ID	PROJECT #	PROJECT TITLE	PA (\$K)	COMM (\$K)	REMARKS
C1	FNWZ05-3001	Replace Family Housing PH5	28,664.0	50.0	127 Units
C2	FNWZ06-3001	Replace Family Housing PH6	42,700.0		190 Units
C3	FNWZ07-3001	Replace Family Housing PH7	43,100.0		199 Units

4.1.6 Non-Appropriated Fund (NAF)

Air Force NAF Project List

MAP ID	PROJECT #	PROJECT TITLE	PA (\$K)	COMM (\$K)	REMARKS
D1	FNWZ 07-0005	Golf Club House/Cart Barn	5,000.0	15	
D2	FNWZ 01-0099	Heritage Club-Enlisted Lounge	714.4	20	
D3	FNWZ 04-0006	Consolidated Skills Center	5,675.0	150	
D4	FNWZ 05-3004	Golf Course Cart Paths	1,043.0		
D5	FNWZ 06-3004	Golf Course Restrooms	475.0		
	FNWZ 07-3003	Upgrade Golf Course Greens	2,000.0		
	FNWZ 07-3004	FamCamp (Off Base)	1,600.0		
	FNWZ 06-3003	Batting Cage	900.0		
	FNWZ 06-3005	Golf Course Concession	500.0		
	FNWZ 07-3002	Consolidated Club	5,000.0	150	

ACC NAF Project List

PROJECT #	PROJECT TITLE	PA (\$K)	COMM (\$K)	REMARKS
FNWZ 00-0101	Heritage Club Renovation-Ballroom	75.0		
FNWZ 02-0038	Bowling Center Snack Bar	100.0		
FNWZ 05-0006	Bowling Mechanics Room (Add/Alter)	50.0		
FNWZ 04-0009	Skeet and Trap Range	200.0		
FNWZ 04-0012	Mini-Golf Course	100.0		
FNWZ 04-0011	Riding Stable Barn	120.0		

NAF Lodging Project List

MAP ID	PROJECT #	PROJECT TITLE	PA (\$K)	COMM (\$K)	REMARKS
D6	FNWZ 06-3002	Construct New TLF	12,200.0	100.0	
	FNWZ 03-0016	Upgrade Furnishings, VAQ (7218)	258.0		
	FNWZ 04-0007	Upgrade Furnishings, TLF	194.0		
	FNWZ 04-0010	Upgrade Furnishings, VOQ	106.0		

Other NAF

MAP ID	PROJECT #	PROJECT TITLE	PA (\$K)	COMM (\$K)	REMARKS
E1	FNWZ02-1102	Construct Mini-Mall	2,541.0	55.0	AAFES
E2	FNWZ02-1101	Construct Shopping Center	9,100.0	45.0	AAFES
E3	FNWZ 02-1112	Construct Banking Facility	1,300.0	50.0	Bank of America
E4	FNWZ 06-3011	Add/Alter Commissary	TBD	30.0	DECA

4.1.7 Environmental Compliance Program

Environmental Compliance Project List

PROJECT #	PROJECT TITLE	PA (\$K)	COMM (\$K)	REMARKS
FNWZ 03-0046	Rpr Fuel Tank Containment	800.0		Gov't Gas Station
FNWZ 04-4026	Replace Fire Hydrants	700.0		
FNWZ 05-4015	Rpl Anodes	70.0		
FNWZ 05-4205	Mtn Water System	30.0		
FNWZ 03-4027	Cons Paint Spray Both	700.0		
FNWZ 02-4101	Divert Storm Water (DRMO)	138.0		DRMO Site
FNWZ 06-4006	Paint Interior Water Storage Tanks	100.0		
FNWZ 06-4007	Rpr Cl Water Mains	600.0		
FNWZ 06-4009	Rpr Drinking Water Mains	3,000.0		Area A
FNWZ 07-4025	Mtn Water System	30.0		
FNWZ 07-4006	Install Emission Controls	5,000.0		
FNWZ 07-4001	Install Paint Booth	300.0		
FNWZ 06-4010	Rpr Lift Stations, 9 EA	1,000.0		

4.1.8 Medical Program

Medical Project List

PROJECT #	PROJECT TITLE	PA (\$K)	COMM (\$K)	REMARKS
FNWZ 00-0024	Rpr Hosp W Parking Area	120.0		
FNWZ 04-0028	Const Addn'l Parking/Lighting	275.0		
FNWZ 04-0107	Rpr Wing 2A	1,453.6	100.0	

4.1.9 Defense Energy Systems Command (DESC)

DESC Project List

PROJECT #	PROJECT TITLE	PA (\$K)	COMM (\$K)	REMARKS
FNWZ 02-0016	Cons Water Collection Sys	59.8		
FNWZ 02-0014	Rpr Ball Valves	33.6		
FNWZ 02-0017	Rpr Product Recovery Tanks	80.0		
FNWZ 02-0019	Install Gates 5224	109.5		
FNWZ 02-0020	Install Gates 9006	193.3		
FNWZ 02-0013	Modify Product Recovery Sys	47.0		
FNWZ 02-0018	Install Filter Separators	282.5		
FNWZ 01-0100	Install Valve Control Hydrant Sys	165.4		
FNWZ 03-0009	Rpr Hydrant Sys Pumps	412.1		

4.1.10 Anti-Terrorism/Force Protection

AT/FP Project List

PROJECT #	PROJECT TITLE	PA (\$K)	COMM (\$K)	REMARKS
FNWZ 04-0065	Install Mylar HRF	400.0		High Risk Facilities
FNWZ 03-0081	317AG HQ Barriers	390.0		
FNWZ 03-0081	28BS Barriers	691.0		
FNWZ 05-0011	Longhorn Dining Barriers	46.0		
FNWZ 05-0007	Heritage Club Barriers	56.0		
FNWZ 05-0009	Commissary Barriers	60.0		
FNWZ 05-0012	Fitness Center Barriers	50.0		
FNWZ 02-0046	Install FL Vehicle Barriers	280.0		
FNWZ 04-0064	Inst Counter Balanced FL Barriers	700.0		Flightline Gates
FNWZ 05-0010	Control Tower Barriers	350.0		
FNWZ 04-0073	7MXG Barriers	550.0		
FNWZ 04-0072	7LRS Barriers	700.0		
FNWZ 04-0057	NCC Barriers 7320	450.0		
FNWZ 02-0050	Switchboard 7318 Barriers	450.0		
FNWZ 99-0080	Rpl Flightline Fence	400.0		
FNWZ 03-0052	Repair Perimeter Fence	275.0		
FNWZ 03-0092	Substation A Barriers	190.0		
FNWZ 03-0053	Substation B Barriers	190.0		
FNWZ 03-0054	Substation C Barriers	2,150.0		
FNWZ 05-0036	Install Vehicle Barrier, Arnold & LA	700.0		

4.1.11 Global War on Terrorism (GWOT)

GWOT Project List

PROJECT #	PROJECT TITLE	PA (\$K)	COMM (\$K)	REMARKS
FNWZ 01-0034	Rpr Firing Range	4,700.0	250.0	
FNWZ 03-0050	Cons CATM Spt Fac	200.0		

4.1.12 Airfield Obstruction Reduction Initiative (AORI)

AORI Project List

PROJECT #	PROJECT TITLE	PA (\$K)	COMM (\$K)
FNWZ030040	Drainage Ditch and Culvert (Primary Surface, Runway 16)	2,000.0	
FNWZ030039	Drainage Ditch and Culvert (Runway 34 Clear Zone)	2,000.0	
FNWZ000114	Longitudinal Grade (Runway 34 Clear Zone)	1,000.0	
FNWZ000086	Longitudinal Grade (West of Runway)	1,000.0	
FNWZ030035	Above-Ground Fuel Tank, Bldg 3010 (Runway 16 ILS Glideslope Emergency Generator)	25.0	
FNWZ00-0109	Hazardous Cargo Pad	10,000.0	
FNWZ000082	Perimeter Fence in R/W Lateral Clear Surface (Runway 16)	200.0	
FNWZ00-0107	Transformer Unit (Sequential Flasher) (R/W 16 Clear Zone)	200.0	
FNWZ00-0083	Liquid Fuels Vaults	150.0	
FNWZ00-0115	Mesquite Trees	100.0	
FNWZ030038	Above-Ground Fuel Tank, Bldg 3202 (TACAN)	25.0	
FNWZ00-0110	Perimeter Fence Line (Runway 34 Clear Zone)	300.0	
FNWZ00-0106	Engine Test Pad & Bldg 5305 (Runway 34 Clear Zone)	250.0	
FNWZ00-0102	Utility Poles (Runway 16 Clear Zone)	200.0	
FNWZ00-0108	Private Structure (Runway 16 Clear Zone)	500.0	

4.1.13 Demolition Program

Demolition Project List

PROJECT #	PROJECT TITLE	PA (\$K)	COMM (\$K)	REMARKS
FNWZ 02-1111	Demo Burger King	56.0		
FNWZ 02-1109	Demo Bank, PO, & BX Facs	966.0		
FNWZ 04-0050	Demo C-130 parts Store 4318	180.0		
FNWZ 05-0017	DEMO CDC 7225-7	426.0		
FNWZ 04-0052	Demo 8129	5.0		
FNWZ 04-0052	Demo 8133	5.0		
FNWZ 05-0018	Demo 7OG HQ 5008	97.0		
FNWZ 02-0008	Demo Family Support 11900	75.0		
FNWZ 05-0016	Demo OSI 7313	42.0		
FNWZ 05-0026	Demo Nose Dock 5018	90.0		
FNWZ 04-0051	Demo Alert Visit Fac 4126	85.0		
FNWZ 03-0008	Demo Golf Course Fac 11975	10.0		
FNWZ 03-0096	Demo Dental Clinic 6133	150.0		
FNWZ 04-0109	Demo MTF Boiler Plant 9202	90.0		
FNWZ 05-0033	Demo Latrine 4306	35.0		

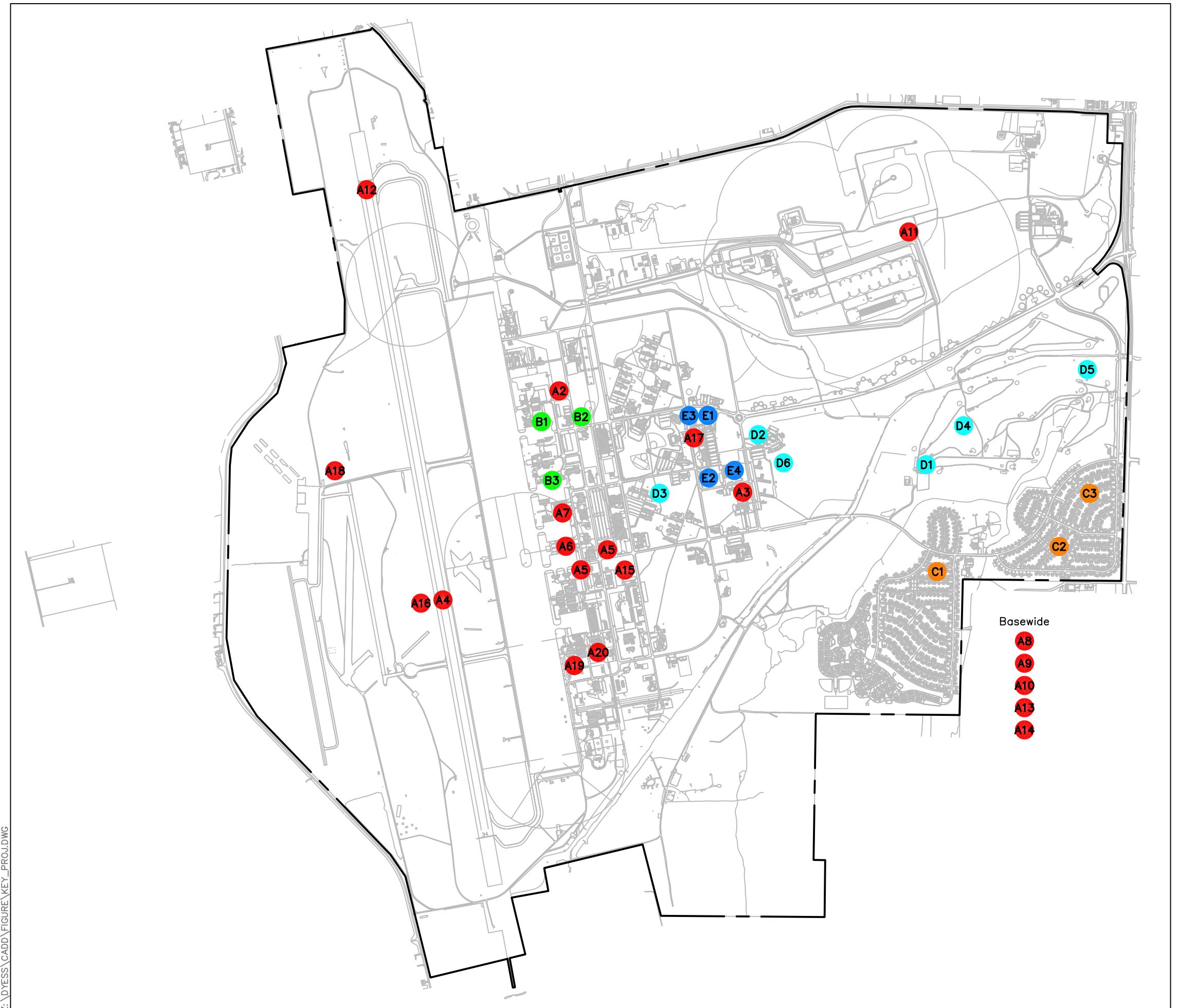
4.1.14 Communications Infostructure

Facility versus CIPS

FACILITY PROJECT #	PROJECT TITLE	CIPS INITIATIVE TITLE	PA COMM COST (\$K)	SC/CS COMM COST (\$K)	REMARKS
FNWZ 02-1101	Construct Shopping Center	Construct Shopping Center	200	45	2005
FNWZ 02-1102	Construct Mini-Mall	Construct Mini-Mall	200	55	2005
FNWZ 04-3005	FL Aircraft Parts Store	FL Aircraft Parts Store	200	55	2005
FNWZ 99-3004	Refueling Vehicle Maintenance Shop	Refueling Vehicle Maintenance Shop	100	50	2005
FNWZ 01-3006	Fire/Crash Rescue Station	Fire/Crash Rescue Station	200	120	2005
FNWZ 03-0045	Rpr 7Og HQ 8030	Rpr 7Og HQ 8030		150	2005
FNWZ 02-0064	Rpr Dorm HVAC 6113	Rpr Dorm HVAC 6113		8	2005
FNWZ 02-0065	Rpr Dorm HVAC 6114	Rpr Dorm HVAC 6114		8	2005
FNWZ 92-0028	Rpr DV Quarters 7420	Rpr DV Quarters 7420		75	2005
FNWZ 02-1112	Construct Banking Facility	Construct Banking Facility	150	50	2005
FNWZ 04-0032	Rpr CEX/EOD Fac 7007	Rpr CEX/EOD Fac 7007		135	2005
FNWZ 05-0032	Renovate DV Quarters 7422	Renovate DV Quarters 7422		75	2005
FNWZ 05-0031	Renovate DV Quarters 7421	Renovate DV Quarters 7421		75	2005
FNWZ05-3001	Replace Family Housing PH5	Replace Family Housing PH5	200	50	2005
FNWZ 01-0034	Rpr Firing Range	Rpr Firing Range		250	2005
FNWZ 02-1111	Demo Burger King	Demo Burger King		150	2005
FNWZ 02-1109	Demo Bank PO BX Facs	Demo Bank PO BX Facs		150	2005
FNWZ 04-0050	Demo C-130 parts Store 4318	Demo C-130 parts Store 4318		100	2005
FNWZ 92-0082	YOUTH CENTER CONSTRUCTION	YOUTH CENTER CONSTRUCTION		135	2005
FNWZ 03-3004	Library/Education Center	Library/Education Center	50	75	2006
FNWZ 03-3002	BCE Complex	BCE Complex	150	600	2006
FNWZ 02-3007	Armament Maintenance/Storage Facility	Armament Maintenance/Storage Facility		110	2006
FNWZ 02-3006	ADAL B-1B Engine Regional Repair Center	ADAL B-1B Engine Regional Repair Center	50	65	2006
FNWZ 05-3002	Consolidated Support Facility	Consolidated Support Facility	150	600	2006
FNWZ 05-3002	Consolidated Fabrication Flight Facility	Consolidated Fabrication Flight Facility	50	500	2006
FNWZ 05-3014	Munition Storage Igloos	Munition Storage Igloos	200	350	2006
FNWZ 02-0066	Rp VOQ HVAC 6135	Rp VOQ HVAC 6135		5	2006

FNWZ 87-0046A/B	Altr/Rpr Base Theater 87-0046A/B	Altr/Rpr Base Theater 87-0046A/B		5	2006
FNWZ 87-0046	Altr/Rpr Base Theater - 87-0046	Altr/Rpr Base Theater - 87-0046		120	2006
FNWZ08-3001	C-130 2-Bay Multi Purp Maint Hangar	C-130 2-Bay Multi Purp Maint Hangar	80	150	2006
FNWZ 99-0056	Repair A/C Mtn Shop 8130	Repair A/C Mtn Shop 8130		65	2006
FNWZ 98-0029	Rpr VOQ 7405	Rpr VOQ 7405		350	2006
FNWZ 95-0032	RprAlter VOQ 7407	RprAlter VOQ 7407		425	2006
FNWZ 96-0026	Provide ADA Access 7316	Provide ADA Access 7316		85	2006
FNWZ 99-0027	Rpr VOQ 7409	Rpr VOQ 7409		425	2006
FNWZ 05-0035	Munitions Covered Stor Bldg	Munitions Covered Stor Bldg		180	2006
FNWZ 05-0034	Munitions Assembly Pad	Munitions Assembly Pad		145	2006
FNWZ 03-3001	Repair 4-Bay Hangar 5020	Repair 4-Bay Hangar 5020	100	300	2006
FNWZ 03-3007	Repair 2-Bay Hangar 4314	Repair 2-Bay Hangar 4314	15	250	2006
FNWZ05-3007	C-130 Multipurpose Maint Hangar	C-130 Multipurpose Maint Hangar	200	400	2006
FNWZ06-3006	317 AG Group Headquarters	317 AG Group Headquarters	200	300	2006
FNWZ 07-0005	Golf Club House/Cart Barn	Golf Club House/Cart Barn	50	15	2006
FNWZ 01-0099	Heritage Club-Enlisted Lounge	Heritage Club-Enlisted Lounge	15	20	2006
FNWZ 04-0006	Consolidated Skills Center	Consolidated Skills Center	100	150	2006
FNWZ 06-3004	Golf Course Restrooms	Golf Course Restrooms	30		2006
FNWZ 07-3002	Consolidated Club	Consolidated Club	100	150	2006
FNWZ 06-3002	Construct New TLF	Construct New TLF	150	100	2006
FNWZ 06-3011	Add/Alter Commissary	Add/Alter Commissary	100	30	2006
FNWZ 04-0107	Rpr Wing 2A	Rpr Wing 2A	50	100	2006

Figure 4.1
Capital
Improvements Key
Projects



REQUEST FOR ENVIRONMENTAL IMPACT ANALYSIS

Report Control Symbol
RCS:

INSTRUCTIONS: Section I to be completed by Proponent; Sections II and III to be completed by Environmental Planning Function. Continue on separate sheets as necessary. Reference appropriate item number(s).

SECTION I - PROONENT INFORMATION

1. TO (Environmental Planning Function)	2. FROM (Proponent organization and functional address symbol)	2a. TELEPHONE NO.
3. TITLE OF PROPOSED ACTION		
4. PURPOSE AND NEED FOR ACTION (Identify decision to be made and need date)		
5. DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES (DOPAA) (Provide sufficient details for evaluation of the total action.)		
6. PROPOVENT APPROVAL (Name and Grade)	6a. SIGNATURE	6b. DATE

SECTION II - PRELIMINARY ENVIRONMENTAL SURVEY. (Check appropriate box and describe potential environmental effects including cumulative effects.) (+ = positive effect; 0 = no effect; - = adverse effect; U= unknown effect)	+	0	-	U
7. AIR INSTALLATION COMPATIBLE USE ZONE/LAND USE (Noise, accident potential, encroachment, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. AIR QUALITY (Emissions, attainment status, state implementation plan, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. WATER RESOURCES (Quality, quantity, source, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. SAFETY AND OCCUPATIONAL HEALTH (Asbestos/radiation/chemical exposure, explosives safety quantity-distance, bird/wildlife aircraft hazard, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. HAZARDOUS MATERIALS/WASTE (Use/storage/generation, solid waste, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. BIOLOGICAL RESOURCES (Wetlands/floodplains, threatened or endangered species, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. CULTURAL RESOURCES (Native American burial sites, archaeological, historical, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. GEOLOGY AND SOILS (Topography, minerals, geothermal, Installation Restoration Program, seismicity, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. SOCIOECONOMIC (Employment/population projections, school and local fiscal impacts, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. OTHER (Potential impacts not addressed above.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SECTION III - ENVIRONMENTAL ANALYSIS DETERMINATION

17. PROPOSED ACTION QUALIFIES FOR CATEGORICAL EXCLUSION (CATEX) # _____ ; OR
 PROPOSED ACTION DOES NOT QUALIFY FOR A CATEX; FURTHER ENVIRONMENTAL ANALYSIS IS REQUIRED.

18. REMARKS

19. ENVIRONMENTAL PLANNING FUNCTION CERTIFICATION (Name and Grade)	19a. SIGNATURE	19b. DATE
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AF IMT 813, SEP 99, CONTINUATION SHEET

APPENDIX C

Example Supplemental Environmental Assessment

Supplemental Environmental Assessment Wing Infrastructure Development Outlook Dyess Air Force Base

Project Name: Building 9999 Removal

Project Location: 300 A Avenue

Date: February 8, 2005

1.0 Introduction

This Supplemental Environmental assessment (SEA) tiers from the Final Programmatic Environmental Assessment (PEA) for Wing Infrastructure and Development Outlook (WINDO) Projects at Dyess Air Force Base (AFB). This SEA incorporates the PEA by reference, in accordance with 40 Code of Federal Regulations (CFR) Part 1508.28.

The overall goal of the WINDO program at Dyess AFB is to provide a framework for programming, design and construction, and effective resource management to allow Dyess AFB to achieve its mission. The Dyess AFB mission is described in Section 1.1.2 of the PEA.

1.1 Purpose and Need

The purpose and need of the WINDO program is described in Section 1.5 of the PEA. The Dyess AFB mission includes a comprehensive planning process, which seeks to rationalize the decision-making process for land use, infrastructure development, and project sitings. The infrastructure development components are implemented through the WINDO program.

Due to the dynamic nature of Air Force operations, infrastructure needs continually shift in response to changing mission requirements.

2.0 Alternative Analysis

The No Action Alternative is discussed in Section 2.1 of the PEA. Under this alternative, Building 9999 would not be removed and would no longer meet the needs of the existing operation.

The Proposed Action would incorporate the removal of Building 9999 with a fire training activity. Since Building 9999 is more than 300 feet from other buildings, the fire training activity would not endanger other facilities at Dyess AFB. The building would be prepared for demolition in a similar manner as described in Section 2.2 of the PEA. The Dyess AFB Fire Department would be responsible for managing all fire activities and ensuring the proper agencies are contacted. These agencies include Dyess AFB Security Police, Base Operations, Tower, Civil Engineering Commander, 7th Mission Operations Center (MOC), 317th MOC, Command Post, Abilene Fire Department, Tye Fire Department, Public Affairs, and any other agencies requested by the Senior Fire Officer.

The following preliminary mitigation procedures shall be utilized to minimize any risk associated with the Proposed Action.

1. Wind direction would not be such to cause the smoke cloud to encroach on the flightline.
2. Wind speed would be between 0 and 15 knots.
3. The air temperature would be between 60 and 85 degrees Fahrenheit.
4. The relative humidity would be between 20 and 70 percent.

3.0 Affected Environment

Section 3.0 of the PEA describes the affected environment at Dyess AFB. Dyess AFB is an active military base that consists of developed, residential, and non-developed areas.

4.0 Environmental Consequences

Impacts related to the No Action Alternative are discussed in Section 4.1.1 of the PEA.

Impacts related to the Proposed Action would be similar to those addressed in Section 4.1.2 of the PEA, Demolition Projects. Impacts related to climate and meteorology, topography, geology, socioeconomic/Environmental Justice, noise, water resources, wetlands, biological resources, cultural resources, the Environmental Restoration Program, and hazardous and toxic materials and wastes have been determined to be analogous to those described in Section 4.1.2 of the PEA. Impacts related to air quality and public safety are discussed in this SEA.

4.1 Air Quality

Burning Building 9999 for use as a fire training activity would result in a temporary addition of suspended particulates (smoke) in the air within and downwind of the proposed burn area. Smoke management and air quality guidelines intended to reduce the effects of smoke would be incorporated in the Proposed Action. There are three strategies to control smoke. These strategies are:

- Avoidance – utilizing atmospheric conditions and weather to minimize smoke in smoke sensitive areas
- Dilution – controlling emissions or utilizing scheduling for dispersion to assure tolerable concentrations in designated areas
- Emissions reductions – use of techniques designed to minimize smoke output per unit area and decrease the contribution to regional haze and intrusions into designated areas

The Proposed Action would utilize a combination of each of these strategies to minimize smoke-related impacts during this action. These strategies will be especially important when minimizing any smoke impacts on Air Force flight operations. Dyess AFB is considered a sensitive receptor to smoke due to the potential safety factors associated with aircraft flight operations. By incorporating these mitigation strategies, there would be no long-term impacts to air quality as a result of this alternative.

The Texas Commission on Environmental Quality (TCEQ) issues an Outdoor Burning Rule that prohibits outdoor burning in Texas, unless the burning activity falls within one of the stated exemptions. Exemption 111.205 of RG-49 states fire training is allowable under TCEQ

regulations. The TCEQ requires notification and authorization of the regional TCEQ office prior to any burning activities.

4.2 Public Safety

The Proposed Action would provide for a long-term beneficial impact on public health and safety by providing for a training opportunity for the Dyess AFB Fire Department. By incorporating building removal with a firefighting training exercise, the Dyess AFB Fire Department would enhance its capabilities to fight future building fires on base.

Short-term impacts related to smoke produced from the fire training activity could be experienced. The guidelines and procedures discussed in Section 4.1 of this SEA would be utilized to minimize any safety risks to workers, flightline operations, and the base populous. This alternative would not have a significant adverse impact on public health and safety.

5.0 References

URS Corporation. 2005. Final Programmatic Environmental Assessment (PEA) for the Wing Infrastructure Development Outlook. Dyess Air Force Base, Texas.

